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الجامعة الأردنيـــــة
كلية الدراسات العليا

التاريـــخ: / /

نموذج رقم (16)
اقرار والتزام بالمعايير الأخلاقية والأمانة العلمية وقوانين الجامعة الأردنية وأنظمتها وتعليماتها لطلبة الدكتوراة

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عنوان الاطروحة:
"أثر البيئة المدرسية على السلوكيات الصحية لدى الطلبة المراهقين في مدينة عمان"
"The Effect of School Environment on the Health Behaviors of Jordanian Adolescents in Amman City"

اعلن بأنني قد التزمت بقوانين الجامعة الأردنية وأنظمتها وتعليماتها وقراراتها السارية المفعول المتعلقة باعداد اطروحات الدكتوراه عندما قمت شخصيا" باعداد اطروحتي وذلك بما ينسجم مع الأمانة العلمية وكافة المعايير الأخلاقية المتعارف عليها في كتابة الأطروحات العلمية. كما أنني أعلن بأن اطروحتي هذه غير منقولة أو مستلة من أطاريح أو كتب أو أبحاث أو أي منشورات علمية تم نشرها أو تخزينها في أي وسيلة اعلامية، وتأسيسا" على ما تقدم فانني أتحمل المسؤولية بأنواعها كافة فيما لو تبين غير ذلك بما فيه حق مجلس العمداء في الجامعة الأردنية بالغاء قرار منحي الدرجة العلمية التي حصلت عليها وسحب شهادة التخرج مني بعد صدورها دون أن يكون لي أي حق في التظلم أو الاعتراض أو الطعن بأي صورة كانت في القرار الصادر عن مجلس العمداء بهذا الصدد.

توقيع الطالب:.. التاريخ: ٢٧/ ١٢ / ٢٠١١

THE EFFECT OF SCHOOL ENVIRONMENT ON THE HEALTH BEHAVIORS OF JORDANIAN ADOLESCENTS IN AMMAN CITY

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December, 2011

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COMMITTEE DECISION

This Thesis/Dissertation (The Effect of School Environment on the Health Behaviors of Jordanian Adolescents in Amman City) was Successfully Defended and Approved on 18/12/2011

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DEDICATION

I dedicate this dissertation to my understanding and loving husband, Khaldoun Hamdan, who has been supporting my work and who shared with me many challenges and sacrifices for completing this dissertation and to my precious son Laith who is the light and joy of our lives. I must also thank my loving family especially my father and mother who have been supporting me and took care of my son while working on this dissertation.

AMS

ACKNOWLEDGMENT

I would like to thank all of those people who made this dissertation possible.

First, I wish to thank my advisor, Dr. Samiha Jarrah and Co-Advisor Dr. Mary Norton for all their guidance, encouragement, support, and patience. Also, I would like to thank my committee members for their very helpful insights, comments and suggestions as well as Professor Muyyad Ahmad for his input in the statistical analysis part.

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LIST OF ABBREVIATIONS

Adolescent Health Research Group: AHRG

Adolescent Wellness Appraisal: AWA

American Academy of Pediatrics: AAP

Center for Disease Control and Prevention: CDC

Department of Statistics: DOS

Emotional Wellbeing: EWB

Family Affluence Scale: FAS

Global School-Based Health Survey: GSHS

Global Youth Tobacco Survey: GYTS

Health Behavior in School Aged Children: HBSC

Human Immune deficiency virus: HIV

Health promotion model: HPM

Jordanian Nursing Council: JNC

Ministry of Education: MOE

Moderate to Vigorous Physical Activity: MVPA

National Institute of Child Health and Human Development: NICHD

National Annenberg Survey of Youth: NASY

Private High Schools: PVTHS

Project on Adolescent Substance use: PAST

Public High Schools: PUBHS

Self Rated Health: SRH

Socio Economic Status: SES

Subjective Health Complaints: SHC

World Health Organization: WHO

Youth Risk Behavior Survey: YRBS

LIST OF APPENDICES

THE EFFECT OF SCHOOL ENVIRONMENT ON THE HEALTH BEHAVIORS OF JORDANIAN ADOLESCENTS IN AMMAN CITY

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ABSTRACT

Background

Little information exists about Jordanian adolescent health-related behaviors and the factors that affect them. Healthy or risky behaviors developed during adolescence have long lasting effects into adulthood.

Study purpose

To examine the effect of the psychosocial aspect of school environment, including peers and teachers, on adolescent health behaviors; and to assess the occurrence of selected health behaviors among adolescent school students in Amman.

Methods

A cross-sectional descriptive correlational design was used to draw a sample of in-school adolescents aged between 11 to 15 years. The final sample included 1166 adolescents from five public and two private schools in Amman. Study participants filled a translated version of 1997/98 HSBC questionnaire.

Findings

The study revealed that negative perception of school environment and lower perception of peer support was associated with unhealthy tooth brushing behavior. Lower perception of teacher support at school was associated with unhealthy physical activity and tooth brushing behaviors. Seat belt use had the highest frequency among the unhealthy behaviors

(85.8%) while tooth brushing behavior had the lowest frequency (46.9%). Girls had higher proportion engaged in unhealthy physical activity and nutrition intake behaviors while boys had higher proportion engaged in unhealthy tooth brushing behavior. Public school adolescents had higher proportion engaged in unhealthy physical activity behavior compared to private school adolescents.

Conclusion: These findings suggest a need for development of interventions that target the school environment and aim to improve the relational supports with teachers and peers which could improve health behaviors and well-being outcomes among adolescents.

Key Words: : Adolescent, health behavior, school environment, peer support, teacher support, cigarette use, physical activity, nutritional habits, seat belt use, dental hygiene.

Chapter One

Background

Adolescence is a critical period of life characterized by physical, emotional, and social changes (WHO, 2003). Today's adolescents will become tomorrow's adults. Thus, any effort to improve adolescents' health is considered an investment in the future of the community. Understanding health behaviors of adolescents is important for researchers, health care providers, and policy makers to develop appropriate health promotion strategies.

Adolescence is defined by the World Health Organization (WHO) as a transitional period that varies across individuals, groups, countries and cultures. It is manifested by rapid physical, mental, emotional, social, and spiritual development. The WHO classified adolescents as persons from 10 to 19 years of age (WHO, 2003).

Adolescence is a transitional period from puberty to adulthood in which one's identity is formulated. It is the time for physiological, intellectual, social and emotional growth that prepares adolescents for adulthood. Adolescence can be divided into three stages: early adolescence, generally ages twelve and thirteen; middle adolescence, ages fourteen to sixteen; and late adolescence, ages seventeen to twenty-one (American Academy of Pediatrics, 2005).

Adolescents are vulnerable to many risk factors that may have a negative effect on their health status. Forty five percent of the newly discovered cases of Human Immune deficiency Virus (HIV) in 2007 were among young group between 15 and 24years of age.

Furthermore, girls between 15-19 years of age are responsible for 11% of all births and that exposes them to higher risk of dying from pregnancy-related causes (WHO, 2008). Problems of malnutrition such as undernourishment, overweight or obesity influence adolescents and expose them to many non-communicable diseases such as hypertension, diabetes or even death. Other challenges are mental illnesses such as depression, mood disturbances, substance abuse, suicidal behaviors or eating disorders, at least 20% of young people will experience some form of mental illness (WHO, 2008). In addition, globally more than 150 million adolescents use tobacco. Finally, unintentional injuries that occur at higher rates in developing countries are the primary cause of disability and death in adolescents (WHO, 2008).

There are several factors that may influence adolescent health and risk taking behaviors including family, peers, schools, and community environments (Adolescent Health Research Group, 2008).

School settings are the place where adolescents spend a substantial part of their lives. While schools are responsible for direct teaching of academic skills, they also provide opportunities for relational, emotional and behavioral development. Schools can play important role in enhancing the health status of adolescents, because many personality characteristics and aspects of health and risk behaviors are formulated during these years (Willms, 2004). The compulsory education period in Jordan is from the age of six to sixteen years; with (89%) of the students completing their secondary education (Ministry of Education, 2010). Therefore, schools can play an important role in health intervention services.

In Jordan, the prevalence of smoking and use of tobacco ranged from 15% to 30% among adolescents aged 13-15 years. The prevalence of smoking was substantially greater among boys than girls, with approximately 19% to 23% boys reporting that they currently smoke compared to 7% to 9% of girls in 2004-2007 respectively. Use of other forms of tobacco was also high among both boys and girls. In 2007, approximately 34% of boys and 17% of girls reported current use of other forms of tobacco (Belbeisi, et al., 2009).

In Jordan, little research has been conducted on adolescent health behaviors. Therefore, this study will investigate the occurrence of certain health behaviors among adolescent populations including physical activity; nutrition intake, dental hygiene, and seat belt use and the influence of the school environment on these behaviors. This will increase our knowledge about adolescent health behaviors and the role of schools in enhancing healthy behaviors and reducing risky behaviors of this population.

Research Problem

Jordan is a developing country with a total population of 5,850,000 million with (37.3%) of the population is under 15 years of age (Department of Statistics, 2008). This highlights the importance of investigating this age group that constitutes a large portion of the population. Unfortunately, little information exists about Jordanian adolescent health-related behaviors and the factors that influence them.

A large multi-stage stratified random study conducted in Irbid, a city in the north of Jordan, to explore the wellness appraisal of Jordanian adolescents, revealed that adolescents engaged in risky health behaviors which could lead to health problems. They consumed less than daily requirements of fruits, vegetables, milk and meat, while the intake of fast

food, soft drinks and sweets were higher than recommended (Haddad, et al., 2009).In addition, a school based adolescents' health survey that assessed the prevalence of important risk behaviors and protective factors among Jordanian adolescents revealed that (21.2%) were overweight, (14.6%) ate fast foods, (15.7%) felt lonely most of the time, (18%) were seriously considering attempting suicide, and (83%) participated in insufficient physical activity (Center for Disease Control and Prevention, 2007).

Many risk behaviors that start during adolescence such as excessive dietary fat intake, poor diet, and physical inactivity last during adulthood and create a major non-communicable disease burden in Jordan. The rapid increase in the prevalence of non-communicable diseases such as diabetes, hypertension, and obesity infers that this problem, along with the increase in life expectancy, and decrease in infant mortality will further increase the rising in the health care costs in Jordan (Brown et al., 2009; Zindah, et al., 2008). Therefore, there is a need for health promotion programs in Jordan .Schools would be an appropriate place to start due to their accessibility and availability of adolescents as education is obligatory until the age of sixteen. Furthermore, promoting healthy lifestyle practices is considered one of nursing research priorities in the country according to Jordanian Nursing Council (Jordanian Nursing Council, 2007).

The Center for Disease Control and Prevention (CDC) in (2009) reported that school connectedness is an important protective factor against many health risk behaviors. Students who feel connected to their schools are more prone to engage in healthy behaviors and to succeed academically. Teacher support, peer relationships, and psychosocial environment at school affect school connectedness. Teachers support at school through

showing interest, attention, and emotional support increases student feeling of connectedness. Being a part of positive peer group encourages students to be involved in school activities, increases their sense of connectedness to school, achievement levels, and engagement in health behaviors. The psychosocial environment at school is influenced by policies related to discipline, opportunities for meaningful student participation, and teachers' classroom management practices. A positive school environment is characterized as the one that prevents a punitive discipline climate; provides caring and supportive interpersonal relationships, provides opportunities to participate in school activities and decision-making, and has shared positive norms, goals, and values.

Schools influence of adolescent behaviors is an important issue that occupies the mind of policy makers, researchers and health professionals (Kirk, 2006). Further studies are needed to investigate this issue, particularly in Jordan, to provide baseline knowledge to build culturally sensitive health promotion programs. Consequently this will lead to behavior modifications that may decrease the prevalence and the costs of non-communicable diseases. Little information is available about the affect of school environment on adolescent health behavior in Jordan. Therefore, this study aims to assess the occurrence of selected behaviors among adolescent populations in Amman, and to assess the effect of school environment on adolescent health behavior.

Significance of the Study

Identifying the occurrence of adolescent health behaviors and their relationship with the school environment will provide vital information for health care professionals to

develop school-based health behavior intervention programs; evaluate effectiveness of health education in school curriculum, and identify areas that need further attention.

The study will add to the body of knowledge on how to promote healthy behaviors during adolescence in Jordan. This might decrease the risk for non communicable diseases and their health care costs later in adulthood. It will also protect this group. This health protection will help ensure longer, more productive lives, and eventually produce healthy adults.

Purpose

The purpose of this study is to examine the effect of the psychosocial school environment, including peers and teachers, on adolescent health behaviors; and to assess the occurrence of selected health behaviors among adolescent school students in Amman.

Research Questions

1- Is there a significant relationship between school environment and adolescent health behavior ($\alpha \leq .05$)?

2- What is the frequency of physical activity, dental hygiene, nutrition intake, and seat belt use behaviors among Jordanian adolescents?

3- Is there a significant difference in adolescent health behavior (physical activity, dental hygiene, nutrition intake, and seat belt use) in relation to demographic characteristics (age, gender, socioeconomic status)?

4- To what extent do the adolescent health behaviors (physical activity, dental hygiene, nutrition intake, and seat belt use) vary across school type (private and public)?

Conceptual and Operational Definitions

“Adolescent: a person between 10 and 19 years of age, Adolescents are more than an age group. They are persons in a transitional phase in life. They are living in a critical time of rapid physical, mental, emotional, social, and spiritual development. Adolescence is a time of transition that varies across individuals and groups, countries, and cultures” (World Health Organization, 2003).

In this study the sample included in-school adolescents aged 11 through 15 years that are randomly selected from private and public schools in Amman.

“Health Promotion: a behavior motivated by the desire to increase well-being and actualize human health potential” (Pender, et al., 2006).

"Risk Factors: are individual or environmental characteristics, conditions, or behaviors that increase the likelihood that a negative outcome will occur” (Center for Disease Control and Prevention, 2009).

“Protective Factors: are individual or environmental characteristics, conditions, or behaviors that reduce the effects of stressful life events; increase an individual’s ability to avoid risks or hazards; and promote social and emotional competence to thrive in all aspects of life now and in the future” (Center for Disease Control and Prevention, 2009)

“School Connectedness is the belief by students that adults and peers in the school care about their learning as well as about them as individuals” (Center for Disease Control and Prevention, 2009).

“School Environment: The physical environment and psychosocial climate that can set the stage for positive student perceptions of school “(Center for Disease Control and Prevention, 2009).

Students' perceptions of the psychosocial aspect of school environment will be measured using three scales; school environment scale (question number 42) that measures students' perception of school environment (with scores ranging from 5 to 25) lower scores on school environment subscale indicate a positive perception about school environment, the students' perception of teachers' support scale (question number 43) (with scores ranging from 4 to 20), and the students' perception of peer support scale (question number 44) (with scores ranging from 3 to 15) lower scores on teachers and peer scales indicate higher level of perceived support. These are five point likert scales ranging from strongly agree to strongly disagree. The school environment scale comprised the statements:" in our school the students take part in making the rules; the students are treated too strictly in this school, the rules in this school are fair, our school is a nice place to be; I feel I belong at this school". The students' perception of teachers' support scale comprised the statements: "I am encouraged to express my own views in my class; our teachers usually treat us fairly; when I need extra help I can get it, my teachers are interested in me as a person". The students' perception of peer support scale comprised the statements:" Most of the students in my class enjoy being together; most of the students in my class are kind and helpful; most other students accept me as I am".

“**Health Risk Behavior:** are those activities that increase one's chance of loss of health status” (Center for Disease Control and Prevention, 2007).

"**Physical Activity** is any activity that increases your heart rate and makes you get out of breath some of the time. Physical activity can be done in sports, school activities, playing with friends, or walking to school. Some examples of physical activity are running, brisk walking, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, football, and surfing" (Currie, et al., 2001).

Healthy behaviors: adolescents' activities that will lead to positive health outcome.

The selected behaviors (physical activity, dental hygiene, nutrition intake, and seat belt use) will be dichotomized into healthy and non-healthy categories.

Physical activity: will be dichotomized as those who outside of school hours usually exercised in their free time so much that they got out of breath or sweated for one hour or less per week or those who exercised more frequently.

Car seatbelt: will be dichotomized use as those who do not always use a seat belt when seated in a car or those who always do so.

Tooth brushing: will be dichotomized as those who brush their teeth less than daily or once a day or more often.

Healthy food intake: The healthy food intake will be measured through the question: How often do you drink or eat any of the following? Fruit, raw vegetables, cooked vegetables, brown bread, whole milk, and skimmed and semi skimmed milk (Never=1; rarely=2; At least once a week, but not every day=3; Once a day=4; More than once a day=5). Higher score indicate healthier intake**.**

Junk food intake: the junk food intake was measured through the question: How often do you drink or eat any of the following? Soft drinks, sweets, potato crisps, chips, hamburgers

or hot dogs, and coffee (Never=5; rarely=4; At least once a week, but not every day=3; Once a day=2; More than once a day=1). Higher score indicate healthier intake.

Socio economic status (SES): SES was measured with the 'Family Affluence Scale (FAS)' which has been developed by Health Behavior in School Aged Children (HBSC) as an alternative measurement of socio-economic status for adolescents (Currie et al., 2008; Torsheim et al., 2006). The 1997/1998 version of FAS is referred to as FASI (including car(s), bedroom and holiday(s)) and the 2001/2002 version as FASII (FASI items plus computer ownership) (Currie et al., 2008) .This valid and reliable measure consists of four different items, which are designed to reflect the level of material well-being in families: Does your family own a car (0, 1, 2 or more), do you have your own bedroom for yourself? (No = 0, yes= 1), how many times did you travel away on holiday with your family during the past 12 months? (0, 1, 2, 3 or more), and how many computers does your family own (0, 1, 2, 3 or more). A composite FAS score will be calculated by summing the responses to these four items ranging from 0 (lowest affluence) to 9 (highest affluence). The FASII will be used in this study and will be recoded into tertiles (high SES, medium SES, and low SES).

Conceptual Framework

Nola J. Pender's Health Promotion Model (HPM) was used as a theoretical background for this study. The model was developed in 1982 and revised in 1996 and 2002 (see figure 1). Pender's model was developed in response to the philosophical shift in nursing that focuses on the quality of life as well as saving lives. It contributed to the art of nursing by providing a way to understand how individuals are motivated to carry out behaviors that will transfer them to a higher level of wellness. The model has been used to

develop research instruments and health promotion programs. In addition, it provides a solution to decrease the financial, human, and environmental burden upon society that may result from not engaging in health promotion (Tomey and Alligood, 2006).

Montgomery (2002) investigated existing theoretical perspectives appropriate for use with adolescent health promotion research and found that Pender's HPM was one of the significant and commonly used theories to guide research. Pender's HPM provides a holistic approach to identify contributing behaviors and assisting with the behavioral change to promote adolescent health. The model can be applied to facilitate change in most settings including schools (Pender, et al., 2006)

Pender developed her model based on the social cognitive theory of Bandura (1977) and the expectancy value model of Feather (1982). The model hypothesized that there are three determinants of individual engagement in healthy behavior's; individual characteristics and experiences, behavior specific cognitions and affect, and situational/interpersonal influences. Individual characteristics include behavioral factors and personal biological, psychological, and sociocultural factors. Cognitive-perceptual factors are the main motivational mechanisms that affect the acquisition and maintenance of health promoting behaviors and these variables are modifiable through nursing actions. Cognitive factors include activity-related effect, perceived self-efficacy, perceived benefits, and perceived barriers. Interpersonal influences are cognitions related to the attitudes, beliefs, or behaviors of others and it includes; norms, social support, and modeling. The situational influences are the individual perceptions and cognitions of the context which may enhance or impede behavior (Tomey and Alligood, 2006).

Adolescent engagement in health behavior may be impacted by several propositions of the model: (1) families, peers, and health care providers are important sources of interpersonal influence that can increase or decrease commitment to ,and engagement in, health-promoting behavior, (2) persons are more likely to commit to and engage in health promoting behaviors when significant others model the behavior and expect the behavior to occur, (3) situational influences in the external environment can increase or decrease commitment to or participation in health-promoting behavior ,(4) persons can modify cognitions, affect, and the interpersonal and environmental factors to create incentives for health actions (Tomey and Alligood, 2006).

The HPM is applicable to this study since it includes many variables that affect adolescent engagement in healthy behavior. Interpersonal influences by peer and teachers are very influential. Situational influences in the external environment are predictive of health promoting behaviors (Pender, et al., 2006) and are therefore important to be identified in the adolescent population. The hypothesized relationship between study variables according to HPM is presented in figure 2.

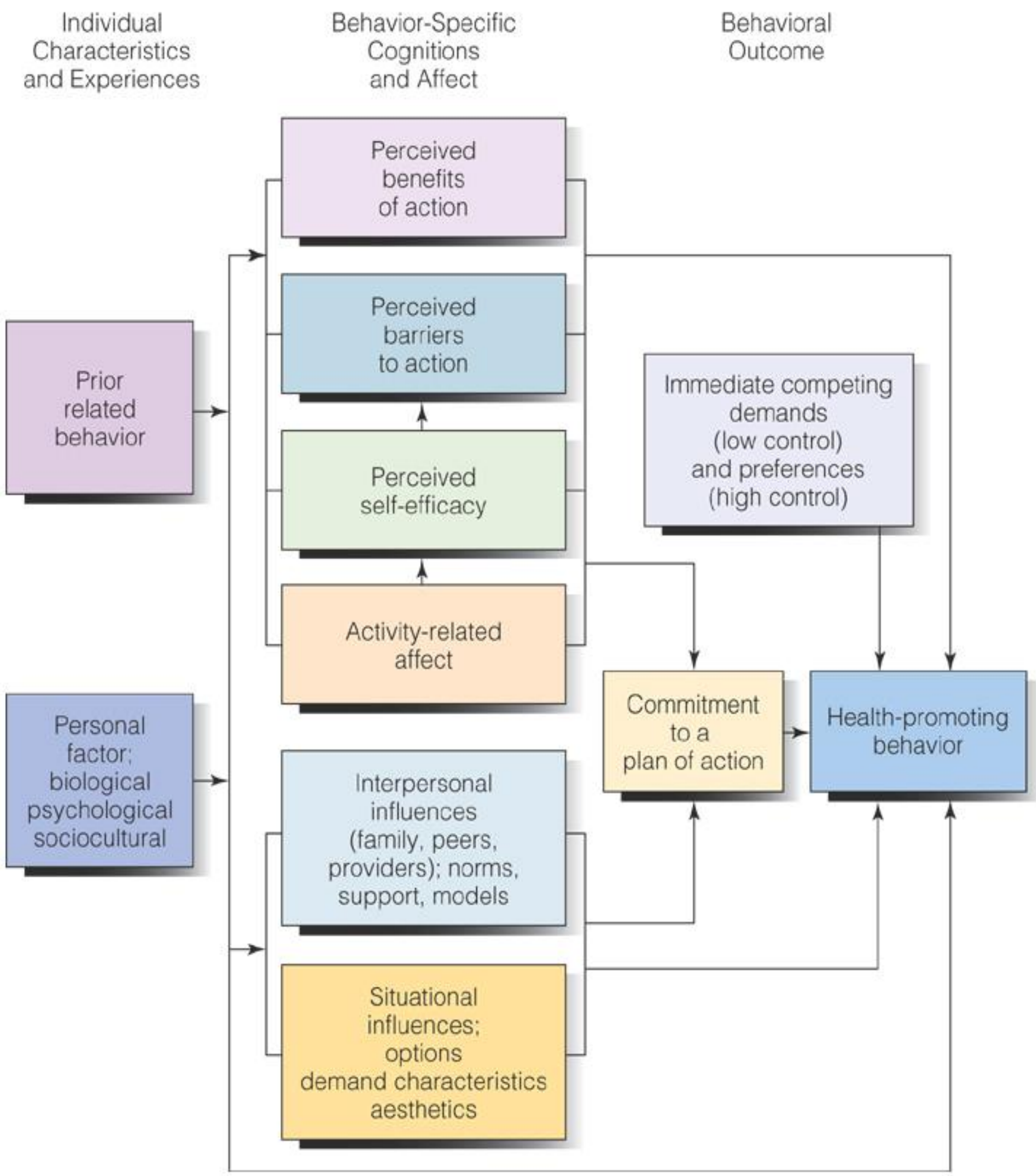


Figure1. Health Promotion Model adapted from "Pender, N.J. Murdaugh, C. L. and Parsons, M.A. (2002), **Health Promotion in Nursing Practice**, (4th Edition, p.60), Upper Saddle River, NJ: PrenticeHall".

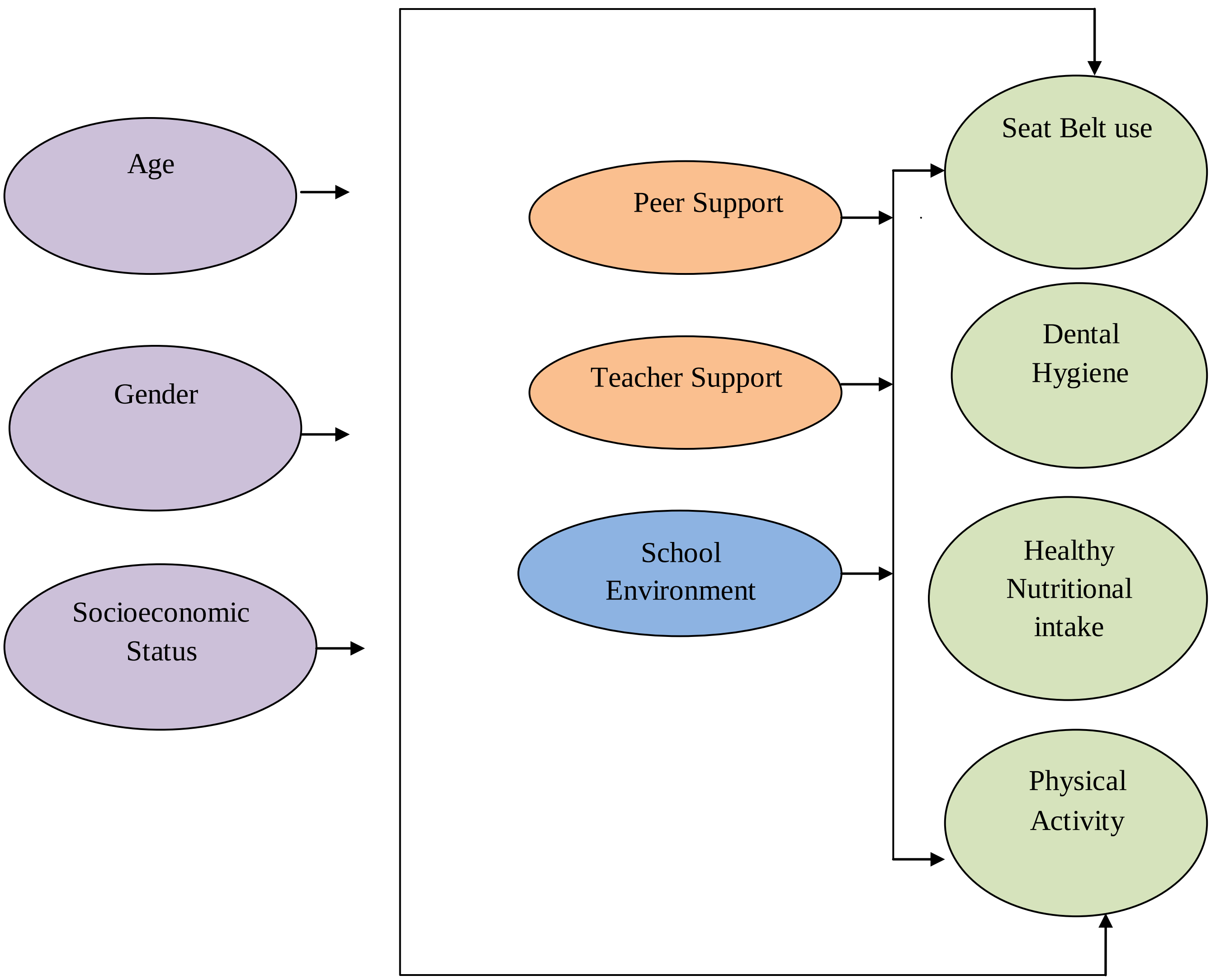


Figure2. Relationship between Study Concepts

Chapter Two

Review of Literature

This chapter summarizes and discusses research related to knowledge about adolescent health behaviors and factors that affect them. It addresses the following areas; school environment and adolescent health behavior, peer relationships and adolescent health behavior, teacher- student relationship and adolescent health behavior, individual factors and adolescent health behavior, adolescent health behavior in Middle Eastern countries, adolescent health behavior in Jordan, school type and adolescent health behaviors, and summary of the literature.

The search of the literature was conducted using MIDLINE, SCIENCE DIRECT, CINAHL, PUBMED and EBSCO data base. Each paper was revised in relation to its purpose, methodology and findings. Additionally, systematic comparison of research findings was conducted to identify similarities and differences. The keywords used in search included: adolescent, school health, health behavior, school environment, peer support at school, teacher support, cigarette use, physical activity, nutritional habits, seat belt use, dental hygiene, tobacco use, and smoking.

Adolescence is a time when health behaviors develop. Healthy or risky behaviors during adolescence have long lasting effect in adulthood. There are many health behaviors that may lead to disturbed health later in life such as lack of exercise, poor diet, smoking, drug taking, alcohol consumption, and teenage sexuality (Jones and Bradley, 2007). Many non communicable diseases have their origin during adolescence such as type two diabetes mellitus (Pinhas-Hamiel and Zeitler, 2005). Research studies reveal that adolescent health behaviors are affected by many factors including; family, peers, schools, teachers, and

community environments (Adolescent Health Research Group, 2007; Denny et al., 2010; Maes and Lievens, 2003; McLellana, et al., 1999; and Springer, et al., 2006).

School Environment and Adolescent Health Behavior

Several research studies examined the effect of school environment on health and risk taking behaviors. Chapman et al. (2011) conducted a study to determine whether the protective factor of school connectedness is related to the risk-taking behaviors of adolescents, particularly in areas involving transport and violence as well as injuries resulting from both. The study used a convenience sample of (509) adolescents aged 13 through 15 years. Logistic regression analysis was used to test study hypothesis. The results revealed that higher scores on the school connectedness scale predicted lower involvement in both transport and violence risk-taking behaviors, after controlling of the gender and ethnic background variables. Similarly, higher ratings of school connectedness were related to fewer reports of transport and violence-related injuries.

Similarly, Denny et al. (2010) in New Zealand used a two-stage random sample cluster design to examine the effects of schools on adolescent health risk-taking behaviors (alcohol use, violence, motor vehicle risky behaviors, attempted suicide, smoking cigarette, unsafe sexual health behaviors) and depressive symptoms. A sample (n = 9056) of adolescents (grades 9 -12) from 96 secondary schools completed a health and well-being survey using internet tablets that included questions on school environment, health risk-taking behaviors, and mental health. Teachers (n=2901) and school administrators (n=91) completed questionnaires on aspects of the school environment which included teacher well-being and burnout, the staff work environment, health and welfare services for students, and school organizational support for student health and well-being. The study

found that schools where adolescents reported a more positive school environment (sense of belonging to school, having supportive relationships with adults at school, high expectations from people at school, and perceptions of safety at school) had fewer adolescents with alcohol use problems, and fewer adolescents engaging in violence and risky motor vehicle behaviors.

Other studies examined school effect on adolescence drug use. Fletcher, et al. (2008) conducted a systematic review to examine the school institutional factors which influence adolescents' use of drugs and to explore the possible mechanisms by which school-level influences individual drug use. The review included both experimental and observational studies. Experimental studies suggested that changes to the school social environment that increase student participation, improve relationships and promote a positive school ethos may be associated with reduced drug use. Observational studies consistently reported that disengagement from school and poor teacher–student relationships were associated with drug use and other risky health behaviors.

In addition, Wu, et al. (2007) investigated adolescent substance use (tobacco, alcohol, illicit drugs) in relation to family, peer and school factors in Taiwan. Data were derived from the Project on Adolescent Substance use (PAST) in Taiwan which aimed at the identification of risk factors for substance use for early prevention. A total of 18 ninth grade classes were randomly selected with all their students included for the study (n=780) coming from an urban, a suburban, and a rural community in northern and southern Taiwan. Information on family characteristics, satisfaction with performance at school, and peer influence was collected using a two stage case finding method to ascertain substance use. Structural equation model analysis was used to test the relations between parent,

school and peer variables and substance use. The study found that strong family relationships and school connections serve as protective factor against substance use. While, peer relationships and especially deviant peer relations were risk factors.

Some research studies linked positive perception of school environment to healthy dental hygiene and nutrition behaviors. Ma (2007) used the Canadian data from the 1998 HBSC cross-national survey to examine what school experiences influence dental hygiene and nutrition behaviors of Canadian adolescents. The sample included adolescents in grades 6 through10 (at age of 12–16).Sample sizes were (2112) in the 6th grade, (2056) in the 7th grade, (2225) in the 8th grade, (2362) in the 9th grade, and (2517) in the 10th grade. Multilevel statistical models were developed to examine the relationships between health outcomes and behaviors and student-level and school-level variables. The study found that schools which have positive disciplinary climate, positive peer environment, and positive sense of belonging to school are effective schools in promoting good dental hygiene. Female adolescents are more likely to brush teeth and floss teeth than male adolescents, with the gender gap increasing consistently across grade levels. Regarding nutritional behavior there were a decline in eating breakfast across grade levels. Males are more likely to eat breakfast and consume junk food than females. Effective schools in promoting healthy nutrition behaviors showed strong parental support and positive peer influence. The researchers conclude that the effects of school experiences exceed the effects of student characteristics. Therefore, school experiences are important to dental hygiene and nutrition behaviors of adolescents.

Moreover, Takakura, et al. (2005) conducted a study to examine how adolescent perception of psychosocial environment is associated with satisfaction with school and

health complains among Japanese high school adolescents. The sample included (2852) adolescents in grades 10 through 12 (ages 15-18) from (25) public high schools in Okinawa. The researchers adapted the 1997/98 HSBC questionnaire and translated it into Japanese. The psychosocial school environment was measured by demands (unrealistic expectations), student autonomy and control (justice of rules and participation in school activities), and support from teachers and students. Analysis of covariance (ANCOVA) were conducted separately for health complains and satisfaction with school. The study revealed that adolescents who perceived high demand, low control, and low support reported the highest health complaints. On the contrary, adolescents who perceived low demand, high control, and high support reported the lowest complaints. Regardless of demand-control combination, if the social support from teachers and students was lacking, the risk of health complain greatly increased and the opposite is true. Regarding satisfaction with school environment adolescents who perceived high demand, high control, and high support reported the highest satisfaction while adolescents who perceived low demand, low control, and low support reported the lowest satisfaction.

On the other hand, Maes and Lievens (2003) conducted a study in Belgium to assess the relationship between the structural and health policy variables of the school and characteristics of the individual on the risk and health behavior of adolescents. Data used were from 29 Flemish schools in which adolescents (n=3225), school administrators (n =29) and teachers (n=1132) were surveyed with anonymous written questions. The study linked individual level and school level characteristics to the prevalence of a range of health behaviors (regular smoking and drinking behavior, tooth brushing, physical activity, good and bad food habits and medicine use) of second and fifth year adolescents of twenty-nine

secondary schools. The study found that the prevalence of these behaviors differs between schools, after controlling for known individual level predictors, for only three risk or health behaviors (regular smoking, drinking habits and tooth brushing). Adolescents who had a positive attitude towards school and saw relations with teachers as good had lower odds of being a regular smoker than those who did not. In schools where rules were clearly formulated and communicated to adolescents there were less regular smokers and drinkers.

Similarly, McLellana, et al., (1999) conducted a cross sectional descriptive survey. They randomly sampled primary and secondary schools from Catholic, Independent and Government education sectors throughout New South Wales, Australia. The sample included (3918) school students attending grade 6 (primary school), grade 8 and grade 10 (high school) from (115) schools to examine the association between adolescents perceptions of their school environment, teachers and peers support and their health behaviors. The main outcome measures were self-reported health status and seven health behaviors (tobacco use, alcohol use, physical activity, dental hygiene, nutritional intake, seat belt and bicycle helmet use).They found that adolescents who had positive perceptions regarding their school environment and perceived their teachers as supportive were significantly more likely to engage in health promoting behaviors adjusting for age, sex and average weekly pocket money. Positive perception of school environment was not associated with frequent exercise and lower take-away food consumption while positive perception of teacher support was not associated with frequent exercise, lower take-away food consumption, and healthy dental hygiene behavior. The prevalence of current smoking and ever being drunk on one or more occasions increased with age among boys and girls. Overall, (63%) of adolescents reported that they exercised two hours or more per week

outside of school hours, in their free time to the extent were they got out of breath or sweated. Frequent exercise was more common among boys. The prevalence of good dental hygiene among adolescents was high, with (94%) of adolescents brushing their teeth daily or more frequently. Girls were more likely than boys across all years to brush at least daily. Over (90%) of boys and girls in each school year consumed take- away food weekly or less frequently. Self-perceptions of being healthy decreased with age, especially among girls. Overall, (83%) of the adolescents reported that they always wore seatbelts while traveling by a car.

To sum up; previous studies linked perception of school environment to health and risk taking behaviors. Chapman et al. (2011) and Denny et al. (2010) found that school environment was associated with involvement in both transport and violence risk-taking behaviors. Fletcher, et al. (2008) and Wu, et al. (2007) connected school environment with drug use problems. Ma (2007) found that positive school environment promote good dental hygiene and healthy nutrition behaviors. On the other hand, the study conducted by McLellana, et al., (1999) revealed that perception of school environment was not associated with exercise frequency or take away food consumption. However, it was associated with dental hygiene, seat belt use, alcohol and tobacco use. In addition to its effect on adolescents' health and risk taking behaviors, Takakura, et al. (2005) allied school environment with school satisfaction and health complains.

Peer Relationships and Adolescent Health Behavior

Many research studies revealed that adolescent health behaviors are influenced by their relationship with peers. Walsh, et al. (2010) , using the 2006 WHO HBSC cross-national survey, examined the roles of parents (monitoring, involvement and support at

school), teachers (support) and peers (excess time spent with friends, peer rejection at school) in predicting risk behaviors (smoking and drinking) and mental well-being among (3499) Israeli-born and (434) immigrant adolescents ages 11, 13 and 15.The results showed that for Israeli-born adolescents, higher levels of parental support, monitoring, involvement at school and teacher support were related to higher mental well-being and lower smoking and drinking, whereas excess time with friends was related to lower mental well-being and higher smoking and drinking. Social rejection at school was associated with lower levels of smoking, drinking, and mental well-being. On the other hand, for immigrant adolescents, higher parental and teacher support at school and parental monitoring were associated with lower levels of substance use. Excess time with friends was associated with higher levels of substance use. Higher mental well-being was associated with higher levels of teacher support, lower levels of both social rejection and excess time with friends. The researchers conclude that the school is an important social support in the health and mental well-being of immigrant school adolescents.

Consistently, Padilla-Walker and Bean (2009) examined adolescent perceptions of negative and positive peer influence (i.e., indirect peer association and direct peer pressure) as they related to adolescent behavior. The study sought to add to the understanding of how perceived peer influence varies as a function of the adolescents’ ethnicity. Regression analyses were conducted using a sample of African American, European American, and Hispanic adolescents (N = 1659, M age =16.06, SD =1.10). The findings suggested that both negative and positive peer influence are important factors to be considered in relation to positive and negative adolescent behaviors, and that the relations between peer influence (indirect peer association specifically) and adolescent behaviors varied somewhat as a

function of the ethnicity of the adolescent. Negative indirect peer association was related positively to adolescents' self-reported risk behaviors (aggression, delinquency, and depression) and negatively related to adolescents' positive behaviors (self-esteem and empathy). On the contrary, positive direct peer pressure was related positively to adolescents' positive behaviors and related negatively to delinquency.

Similarly, Ali and Dwyer (2009) used longitudinal data of a nationally representative sample of adolescents to determine the role of peers on adolescents smoking behavior. The study found that a 10% increase in the proportion of classmates who smoke will increase the likelihood of smoking by more than 3%. Also, an increase in smoking rates among close friends by 10% will increase the likelihood of smoking by 5%. In addition, they found the influence of close friends from adolescence years continued to have an impact on smoking behaviors in adulthood.

Also, Trogdon, et al. (2008) used data from the national longitudinal study of adolescent health, which is a nationally representative, school-based survey of adolescents in grades 7 through 12 (n= 2800) to estimate peer effects on adolescents' weight. The results indicated that friends' weight is correlated with an adolescent's own weight even after controlling for demographics, smoking status, birth weight, and own parental and household characteristics including parental obesity. The impact of peer weight is larger among females and adolescents with high body mass index.

On contrary, Anteghini, et al. (2001) who conducted a study in Brazil using data from the 1997 survey of adolescent health among (2059) 8^{th} and 10^{th} grade adolescents. They aimed to describe the prevalence of health risk behaviors and identify risk and protective factors that are associated with several health risk behaviors (cigarette smoking,

drug use, onset of sexual intercourse before age 15, pregnancy, gun-carrying, suicidal ideation, and suicide attempts) among adolescents and also explored gender differences. The study found that peers, school and teacher connectedness reduced the involvement for all health risk behaviors. It also found that adolescents in Santos, Brazil reported high rates of gun-carrying, suicidal thoughts and attempts, sexual intercourse, and pregnancy.

To summarize, reviewed research studies indicated that peer connectedness and positive peer pressure were associated with lower engagement in risk taking behaviors among adolescents (Padilla-Walker and Bean, 2009; and Anteghini, et al., 2001). On the contrary, other studies found that excess time spent with friends and peer engagement in risky behaviors increased adolescent engagement in risk taking behaviors (Ali and Dwyer, 2009; Trogdon, et al., 2008; and Walsh, et al., 2010)

Teacher- Student Relationship and Adolescent Health Behaviors

Several research studies linked adolescent behaviors to their relationship with teachers. Rudasill, et al. (2010) conducted a study to understand associations between students' background; early temperament characteristics; and the quality of their later relationships with teachers (in grades 4, 5, and 6) as well as maladaptive risky behavior in 6^{th} grade. Another purpose was to examine the mediating role of students' relationships with their teachers in 4^{th}, 5^{th}, and 6^{th} grades on the associations between background characteristics and temperament and maladaptive risky behavior in early adolescence. The longitudinal sample of participants (N=1156) was from the National Institute of Child Health and Human Development (NICHD) study of early child care and youth development conducted in the United States. Structural equation modeling was used to estimate paths from (a) background characteristics to student–teacher relationship quality

and risky behavior, (b) temperament to student–teacher relationship quality and risky behavior, and (c) student–teacher relationship quality to risky behavior. Findings indicate that students' family income, gender, receipt of special services, and more difficult temperament were associated with risky behavior. Adolescents from lower income families, boys, and adolescents receiving special services, and those with more difficult temperaments were more likely to engage in risky behavior in 6^{th} grade. Adolescents with more difficult temperaments were more likely to report risky behavior and to have conflict in their relationships with teachers. More conflict predicted more risky behavior. The study found male adolescents had more conflict in relationships with teachers than female adolescents, and female adolescents had closer relationships with teachers than male adolescents. Closer student–teacher relationships were associated with less risky behavior. Results suggest negative relationships, specifically student–teacher relationships, may increase the risk that certain adolescents will engage in risky behavior. Greater levels of student–teacher closeness were related to less risky behavior support the idea that positive student–teacher relationships may buffer early adolescents from engaging in risky behavior.

Furthermore, Freeman et al. (2009) used a sample of more than (120,000) adolescents aged 11, 13, and 15 from 26 European countries, Canada, the United States and Israel who took part in the 1997/98 HBSC survey to examine the extent to which school environment and school pressure could predict adolescent emotional health and bullying. Additionally, the study investigated whether these relationships were consistent across countries. Exploratory analysis technique was used to reveal the underlying clusters inherent within the dataset. The study found that adolescents, who have the most positive relationships to school outcomes, including academic achievement, truancy, teacher and

peer support, also had the most positive emotional health and the lowest incidence of bullying. The relationship between variables did not differ significantly across countries.

In the same way, LaRusso, et al. (2008) conducted a study to investigate the mechanisms by which teacher behavior may promote favorable effects on adolescent health risk behaviors and mental health outcomes in high schools using the social control theory and a social developmental-contextual model. Researchers draw a nationally representative sample of (476) adolescents aged 14 through18 from the National Annenberg Survey of Youth (NASY) in the United States. Structural equation modeling was used to test four hypotheses. First, predict that teacher support and regard for adolescents' perspectives independently help to create respectful environment; second, that respectful environment and teacher support produce greater social belonging that is associated with lower levels of individual depressive symptoms; third, that a respectful environment is also associated with fewer depressive symptoms; and finally, that respectful environment discourage friendships with drug using peers and produce healthier schools. The study found that teachers can build respectful school environment by respecting their students' points of view and decision making capabilities. Consequently, students will perceive greater social belonging and report lower levels of drug use.

Consistently, Voisin, et al.(2005) collected data from a convenience sample of (550) detained adolescents (ages 14–18 years) to explore the association between adolescents' perception of teacher connectedness and a range of health risk behaviors, such as gang membership, use of alcohol, drugs, and tobacco, and engagement in sexual risk behaviors prior to detainment. Participants answered survey questions using audio-computer assisted self-interviewing procedures that assessed demographic, pro-social problem, and drug and

sexual risk behaviors. A multiple logistic regression analyses controlling for demographic and socioeconomic status, truancy, number of days in the detention center, and family factors indicated that adolescents who reported low teacher connectedness, relative to their peers reporting high teacher connectedness, were twice as likely to use marijuana and amphetamines, and twice as likely to be sexually active, have sex while high on alcohol or drugs, have a partner who was high on alcohol or other drugs during sex, and have multiple sexual partners. In this study, statistically significant differences between adolescents perceiving low and high connectedness were identified across a broad array of health risk behaviors, even after controlling for potentially confounding factors such as gender, family socioeconomic status, truancy, number of days in detention, and perceived family support.

Reviewed research studies indicated that teacher-student relationship was associated with adolescent engagement in risk taking behaviors and emotional and mental health (Freeman et al., 2009; LaRusso, et al., 2008; Rudasill, et al., 2010; and Voisin, et al., 2005). LaRusso, et al., 2008 illustrated that teachers can build respectful school environment by respecting their students' points of view and decision making capabilities. Consequently, students will perceive greater social belonging and report lower levels of drug use. On the other hand, Rudasill, et al. (2010) explained that closer student–teacher relationships were associated with less risky behavior.

Individual Factors and Adolescent Health Behavior

Several studies examined the influence of socioeconomic status on adolescent behaviors. Saab and Klinger (2010) used the data from the 2006 Canadian HBSC study, in which Grades 6 through 10 adolescents (N= 9670) and administrators (N =187) were surveyed, to assess the relationship between adolescent- and school-level factors and

adolescent health and wellbeing outcomes, and to estimate the variability present at each of the adolescent and school levels for each of three selected health-related outcomes. The three outcome measures were SRH, Emotional Wellbeing (EWB), and Subjective Health Complaints (SHC). The results indicated that both individual and school-level factors were associated with adolescents' reported health outcomes. The effects of individual-level factors on adolescents' reported health outcomes varied by school characteristics. Additionally, there appear to be school-level factors that either improve or worsen these relationships. Significant individual factors included gender, family wealth, family structure, academic achievement and neighborhood. Regarding school-level factors Adolescents' reported EWB was higher in schools having wealthier populations. In contrast, an increased presence of problem behaviors in a school was associated with lower levels of reported SRH and subjective health. More problematic behaviors (aggression) were associated with lower levels of EWB.

Similarly, Richter et al. (2009) used a representative samples of 13 and 15-year-old adolescents in 33 European and North American countries (n =97,721) from the HBSC study 2001/2002 to investigate socio-economic differences in self-rated health among adolescents and the contribution of health-related behaviors to the explanation of such differences. The 2001/2002 survey used cluster sampling design. Schools and classes within schools were selected to be representative for 11, 13 and 15 years old adolescents. The data were collected by standardized questionnaires, administered in school classrooms according to the international protocol. Multilevel logistic regression models were used to analyze the data. The results revealed that in all the countries increasing risk of low Self Rated Health (SRH) is associated with low income families. On average, adolescents from

low income families had an odds ratio for low self-rated health of (1.84) for boys and (1.80) for girls, compared to those from high income families. Also, the study found that behavioral factors are significantly associated with family income. Smoking was associated with family income only in some countries. Increased risk of regular smoking was associated with low income. Television use, fruit and vegetable consumption, were significantly associated with family income in most countries. Excessive television use was associated with low family income. Daily fruit and vegetable consumption was also less common among adolescents from low income families than among their high income counterparts.

Some research studies examined gender effect on the prevalence of health behaviors. Peltzer, K. (2009) conducted a study to investigate aspects of adolescent health enhancing behaviors and their relationship with potentially protective factors in the home and school environment. The sample included (12,740) adolescents at the ages from 13 through 15 years from four African countries (Kenya, Namibia, Uganda, and Zimbabwe) chosen by a two-stage cluster sample design to represent all adolescents in grades 6, 7, 8, 9, and 10 in each country. The measure used was part of the Global School-Based Health Survey (GSHS) questionnaire including various domains of health behavior. The study found that (78%) of the adolescents indicated most of the time or always washing hands before eating in the past 30 days while washing hands most of the time or always with soap in the past 30 days was (49%). Never in a physical fight in the past 12 months (53%) and never bullied in the past 30 days (37%) was relatively low. Not depressive (52%) and not having made a suicide plan (68%) in the past 12 months was low. Non-smoking (83%), non-smokeless tobacco use (86%), non-risky drinking (82%), and non-drug use (91%) were

relatively high. From those adolescents who had been sexually active, only (46%) had used a condom at last sex. Physically active for at least 60 min per day for three or more days a week was with (35%) low. Boys engaged more than girls in physical activities, and girls were less than boys in a fight, used less tobacco, had less exposure to passive smoking, had less risky sex (condom use), and used less often drugs than boys. Multiple logistic regression identified school attendance, parental or guardian connectedness, peer support at school, and parental supervision as important factors that affect adolescent health.

In the same way, Springer, et al. (2006) conducted a study that examined the association between perceived parental social support and perceived social cohesion at school with selected adolescent risk behavior outcomes (physical fighting, victimization, suicidal ideation, substance use, and sexual intercourse) among (930) female and male public secondary school adolescents studying in the central region of El Salvador. The study questionnaire comprised closed-ended items of parent/school relationships and risk behaviors based on the United States CDC's Youth Risk Behavior Survey (YRBS). In regression analyses, female adolescents who perceived low parental social support were significantly more likely to report engaging in all risk behaviors examined, and female adolescents with perceptions of low school social cohesion were more likely to report suicidal ideation, binge drinking, and drug use. Perceptions of parental social support and school social cohesion held fewer but still significant associations across risk behaviors for male adolescents. Male adolescents who reported low parental social support were significantly more likely to report suicidal ideation, drug use and physical fighting, while male adolescents with low perceived school social cohesion were more likely to report physical fighting but less likely to report binge drinking. Gender differences were found in

the prevalence of risk behaviors. Males reported significantly higher prevalence of physical fighting, having been threatened or hurt with a weapon, illicit drug use, and having ever had sexual intercourse; while females reported higher prevalence of having seriously considered suicide. No statistically significant gender difference was found with binge drinking.

These studies indicated that adolescents from low income families are more likely to engage in risk taking behaviors and to have lower level of adolescent' reported EWB (Richter et al., 2009; and Saab and Klinger, 2010). Gender differences were found in the prevalence of health promoting and risk taking behaviors (Springer, et al., 2006; and Peltzer, 2009).

Adolescent Health Behavior in Middle East Countries

Al Sabbah et al. (2007) conducted a study to describe the food habits and physical activity patterns among Palestinian adolescents and to investigate their relationship with socio-demographic factors. This study was part of HBSC cross-national survey. The study used a stratified random sampling strategy to draw a nationally representative sample of adolescents from 6th, 8th, 10th and 12th grades. The adolescents completed a modified version of the international HBSC questionnaire which was translated to Arabic. Chi square tests were used to compare differences in food habits and physical activity by gender, grade and region (Gaza versus West Bank). Binary logistic regression was used to investigate the effect of mother's/father's level of education controlling for region, grade and gender. The sample consisted of (8,885) adolescents; (53%) were from the West Bank and (47%) from the Gaza Strip. The study found that adolescents in the West Bank consume more fruit, meat, chicken, sweets and soft drinks, but less vegetables than adolescents in Gaza.

Overall, the proportion of daily consumption of fruits was (31%), vegetables (45%), milk (22%), sweets (35%), and soft drinks was (24%).Overall, girls reported more daily consumption of fruit, vegetables and sweets than boys, and less consumption of soft drinks, milk, meat and chicken. Only (20%) of the sample were doing physical activity for more than five days during the past week or usual week. Boys were physically more active than girls, whereas girls reported doing more homework. Both boys and girls reported less physical activity with increasing age. Consumption of fruit and milk was positively associated with both parents' education, while consumption of meat, chicken and soft drinks was positively associated with mother's education only. Having breakfast on schooldays was positively associated with the father's education. Physical activity and television viewing were associated with the mother's education. The parents' level of education had no effect on vegetable consumption and dieting status.

In 2005 a study conducted in Lebanon as part of GSHS. A two-stage cluster sample design was used to produce a representative sample. The survey was administered to adolescents in grades 7 through 9 (aged 13-15 years) in (100) schools across Lebanon (50 private and 50 public). Over five thousand adolescents (n= 5,115) participated in the GSHS. The study found that (19.5%) of adolescents had at least one drink containing alcohol in the month preceding the survey; and (40%) had two or more drinks on the day they drank. Fifteen percent of adolescents are at risk for becoming overweight. Approximately, (40%) of adolescents felt so sad or hopeless in the last 12 months to the extend they stopped doing their usual activities. Sixteen percent seriously considered suicide. Related to violence, (40%) of adolescents were physically attacked by a parent, and (25%) by a teacher. Half have been in a physical fight one or more times in the last year.

And over (30%) state that they have been bullied. Overall, (65%) of adolescents brushed their teeth less than 3 times per day, this range from (57%) in 7th grade to (74%) in 9th grade. Male adolescents (14.9%) were significantly more likely than female (9.9%) to not clean or brush their teeth and public school adolescents (15.4%) were significantly more likely not to clean or brush their teeth than private school adolescents (9.6%). Approximately fourteen percent reported using a seat belt most of the time, or always, when riding in a car or other motor vehicle driven by someone else. During the past 30 days (79%) of adolescents usually ate fruit, (74.4%) of adolescents usually ate vegetables, (45.6%) of adolescents usually ate cereals and carbohydrates, (35.9%) of adolescents usually drank milk or ate milk products, and (33%) of the adolescents drank carbonated soft drinks. Male adolescents (27.6%) were significantly more likely than female adolescents (21.9%) to eat fruits and vegetables five or more times per day also male adolescents (38.5%) were significantly more likely than female adolescents (33.6%) to drink milk or eat milk products two or more times per day. Males (39.6%) were more likely to drink carbonated soft drinks than females (27.0%). Males (31.6%) were significantly more likely to eat fast food than females (23.6%). adolescents in the 7th grade (83.2%) were significantly more likely to report eating fruits one or more times per day than adolescents in the 8th grade (77.1%) or in the 9th grade (75.4%) and, adolescents in 7th grade (28.4%) were significantly more likely to report eating vegetables than adolescents in 8th grade (23.0%) or in 9th grade (21.5%). Also, adolescents in the 7th grade (37.9%) were significantly more likely to drink milk or eat milk products than those in the 9th grade (32.4%) (Center for Disease Control and Prevention, 2005).

Compared to adolescents in Palestine, Lebanon adolescents consumed more fruit, vegetables, milk, and soft drinks. In Palestine girls reported more daily consumption of fruit and vegetables, however; boys reported more daily consumption of fruit and vegetables in Lebanon. Boys reported more consumption of soft drinks in both countries (Al Sabbah et al., 2007; Center for Disease Control and Prevention, 2005).

Adolescent Health Behavior in Jordan

Haddad, et al. (2009) used a multi-stage stratified random sample to obtain a sample of (269) boys and (261) girls between (12–17-year old) from six public schools in the city of Irbid, which is located in the north of Jordan. The purpose of the study was to explore the wellness appraisal of Jordanian adolescents. The study assessed physical activity and nutrition appraisal, quality of life appraisal, and school and outside activities appraisal. A modified version of Adolescent Wellness Appraisal (AWA) questionnaire was used to collect data for this study. The study found that (54.5%) of adolescents described their own health status to be excellent, whereas only (0.2%) described their health to be poor. The majority of adolescents had teeth checked every 6 months or yearly (55.5%), brushed teeth once a day (52.8%) and slept from seven to nine hours or more at night (53.2%). Moreover, a majority of adolescents (52.5%) did exercise three to six times weekly, while (24.7%) exercised once a week or less, and (48.5%) reported that they were physically active. The results showed that there was a significant difference between boys and girls in regard to exercise. Boys were more active than girls in the amount of weekly exercise. One of the important findings of the study was adolescents' consumption of less than the daily requirements of fruits, vegetables, milk and meat, while the intake of fast food, soft drinks and sweets were higher than recommended.

In addition to that, in 2007 The GSHS was conducted in Jordan in collaboration with the CDC to monitor the prevalence of important health risk behaviors and protective factors among adolescents aged 13 through15 years: dietary behaviors, hygiene, mental health, physical activity, protective factors, sexual behaviors that contribute to HIV infection, tobacco use, and violence and unintentional injuries. A two-stage cluster sample design was used to produce data representative of all adolescents in the 8th, 9th, and 10th grades in Jordan. At the first stage, schools were selected with probability proportional to enrollment size. At the second stage, classes were randomly selected and all students in selected classes were eligible to participate. The school response rate was (100%)، the student response rate was (99.8%), and the overall response rate was (99.8%). A total of (2,197) adolescent participated in the Jordan GSHS. The result of the survey showed that (21, 2%) of adolescents were overweight, (14.6%) of adolescents ate at fast food restaurant, (15.7%) of adolescents felt lonely most of the time, (18.0%) were seriously considering attempting suicide, (25.3%) of adolescents did not clean or brush their teeth, and (83%) of adolescents participated in insufficient physical activity (Center for Disease Control and Prevention, 2007).

On the other hand, Belbeisi, et al. (2009) used the data obtained from Global Youth Tobacco Survey (GYTS) and the GSHS to assess the prevalence of tobacco smoking among adolescents in Jordan. Both surveys used multistage sample design to draw the study sample in which schools were selected based on the enrollment size and classrooms chosen randomly within selected schools. In the two surveys sampled adolescents aged 13 through15 years. The GYTS was conducted in Jordan during 1999 while The GSHS was conducted in Jordan during 2004 and 2007. According to the surveys the prevalence of

smoking was (18%) in 1999, about (13%) in 2004, and (16%) in 2007. The current prevalence of smoking and use of other forms of tobacco was higher among boys than girls. The prevalence of current smoking ranged from (19%) to (23%) among boys compared to (7%) to (9%) among girls in 2004 and 2007 respectively. During 2007; (34%) boys and (17%) girls reported using other forms of tobacco such as water pipe.

School Type and Adolescent Health Behaviors

Several research studies focused on the effect of school type on adolescent behaviors. Penhollow and Young (2005) conducted a study to explore differences among selected health-risk behaviors between adolescents in public and private high schools. Data were collected from a sample of adolescents in Northwest Florida (N = 1606). For this study, all eight public high schools in one northwestern county in Florida were surveyed during two days. In order to maximize student eligibility in the public high schools, two classes from each grade level (eight classes per school), during the second period of the day, were randomly selected. One of four private high schools in the same northwestern county in Florida participated in the study. A modified version of the 2001 YRBS was used for the study. Chi-square analyses were used to determine if statistically significant differences existed in selected health-risk behavior prevalence rates among adolescents in public and private high schools. Private high school adolescents reported higher prevalence rates for driving after drinking alcohol, cigarette and alcohol use (males), and binge drinking. Public school adolescents had higher prevalence rates for physical fighting and suicide (females), gang activity, sexual intercourse, and condom use at last sexual intercourse ($p < .05$).

Similarly, Valois, et al. (1997) examined differences in selected health risk behaviors among (5,517) adolescents attending public high schools (PUBHS) and (1,089) adolescents attending private high schools (PVTHS) in South Carolina. The 1995 CDC YRBS was used to collect self-report information on adolescent risk behaviors. Chi-square analyses were performed for comparing public and private adolescents on selected risk behaviors. Both PUBHS and PVTHS adolescents reported substantial involvement in most of the risk-taking behaviors examined. PUBHS adolescents, in general, were more likely to report higher prevalence rates than PVTHS adolescents for most of the selected health risk behaviors. However, PVTHS adolescents reported even higher prevalence rates than PUBHS adolescents for alcohol use, driving after drinking, and binge drinking; smoking cigarettes (past 30 days); chewing tobacco (males only); marijuana use during the past 30 days (females only); and use of alcohol or other drugs before last act of sexual intercourse. Results suggest attendance at a private high school is not a panacea for protection against adolescent risk behaviors, and that all high school adolescents could benefit from a coordinated school health program.

Research studies indicated that adolescents in both public and private schools engage in risky behaviors, however, there is a significant difference in the prevalence of behaviors between private and public schools (Penhollow and Young, 2005; Valois, et al., 1997). Penhollow and Young (2005) found that private high school adolescents reported higher prevalence rates for driving after drinking alcohol, cigarette and alcohol use (males), binge drinking, and life satisfaction; public adolescents had higher prevalence rates for physical fighting and suicide (females), gang activity, sexual intercourse, and condom use at last sexual intercourse. On the other hand, Valois, et al. (1997) found that PUBHS

adolescents, in general, were more likely to report higher prevalence rates than PVTHS adolescents for most of the selected health risk behaviors.

Summary of the Literature

To summarize, the multinational reviewed studies showed that many of the health behaviors developed during adolescence have a long term effect on their health. School environment, peers, teachers, and family are important factors that influence the adolescent engagement in risky health behaviors. The results revealed that adolescent positive perception of school environment and teacher support resulted in less engagement in risky health behaviors. Family support and family control served as protective factors against risky behaviors. Peer influence has positive and negative effect on adolescent health behavior. Peer connectedness and support decreased the engagement in risky behaviors. However, peer engagement in risky behaviors increased the likelihood of adolescent engagement in this behavior. Socioeconomic status, gender, and age are individual factors that affect the prevalence of risk behaviors. Jordanian adolescents do engage in risky behaviors and more information is needed to examine the factors that affect these behaviors to design appropriate preventive interventions. Results indicated that public and private school adolescents do engage in risk behaviors. In Jordan, studies are needed to examine differences in selected health and risk behaviors among public and private school adolescents.

Chapter Three

Methods

Research methods are "the steps, procedures, and strategies for gathering and analyzing data in research investigation" (Polit and Beck, 2004, pp. 723). The purposes of this study are to assess the occurrence of selected health behaviors among adolescents attending school in Amman; and to examine the association of school environment, peers and teachers with adolescent health behaviors. This chapter discusses the: design of the study, variables of the study, settings, sample size and sampling, ethical consideration, instrument, pilot study, data collection procedure, and data analysis.

Study Design

Little information is available about adolescent health behavior in Jordan, or the effect of school environment on this behavior. Therefore, a cross-sectional descriptive correlational design was used to examine the relationship between adolescent perception of their school environment and their health behavior. The study design assessed the occurrence of these health behaviors among adolescents and examined the association of the adolescent health behaviors with school environment.

Descriptive research is efficient for collecting extensive amount of data about the phenomena and examining a large number of interrelationships in a short time. It is widely used in nursing due to its capability of solving practical problems and it is usually cross-sectional (Polit and Beck, 2004, pp. 194 and195).

Variables of the Study

The dependent variable: health behaviors including; physical activity, dental hygiene, nutrition intake, and seat belt use.

The independent variables: the three scales assessing students' perceptions of school environment (school environment scale, perceptions about teacher support scale and perceptions about peer support scale).

Settings

The study was conducted in public and private primary schools in Amman. Amman encompasses (38.7%) of the population (Department of Statistics, 2008). Schools in Jordan have two major sectors, private and public. The private education sector accommodates for (36.7%) while the public sector accommodates for (57 %) (Ministry of Education, 2010). The schools were chosen randomly according to the proportion of schools within the two sectors. Other sectors that contribute to education are the Ministry of Islamic Affairs, Ministry of Higher Education, Ministry of Social Development, Ministry of Defense, The United Nations Relief and Work Agency .These sectors were excluded from the study.

Sampling Method

The target population for the study included in-school adolescents aged between 11 through 15 years in Amman. A multi-stage cluster sample design was used to draw the study sample. In cluster sampling there is a successive random sampling of units which makes this method more economic and practical than other types of probability sampling (Polit and Beck, 2004, pp. 297).

Using probability sampling technique involves random selection of elements from a population which means that each element in the population has an equal, independent

chance of being selected (Polit and Beck, 2004, pp. 295). Probability sampling resembles the population characteristics as closely as possible, decreasing the chance of sampling bias or sampling error. Consequently, the results obtained by this technique would be more generalisable to the population (Taylor, et al., 2006, pp. 203).

Amman is divided into one private directorate and five public directorates from which the second public directorate was randomly selected by blindly picking one out of five pieces of paper, numbered 1-5. Five public schools and two private schools were randomly selected to represent the proportion of education presented by each educational sector. The schools were chosen randomly from the list of schools that is available online by the Ministry of Education (Ministry of Education, 2010). A table of random numbers was used to draw the schools from the Ministry of education list.

Within each selected school the researcher chose a class from each of the 6^{th}, 7^{th}, 8^{th}, 9^{th}, and 10^{th} grades randomly. All the students in the randomly chosen classes were included in the study if they agree to participate and their parents consent their participation. The inclusion criteria were; in-school adolescents aged 11 through 15 years in Amman, adolescents who agreed to participate and their parents consent their participation. The exclusion criteria was; any adolescent who was under 11 or above 15 years of age, any adolescent who refuse to participate or his parents did not consent, and any adolescent absent in the survey day. The final sample included (1166) adolescents.

Sample Size

The sample size was calculated based on the target population using confidence interval of plus minus three (Currie, et al., 1998), confidence level of 95% and a target population of (72,756) students (Department of Statistics, 2008), the resulted sample size

was (1052) students. Additional 10% were added to the sample for any possible missing data (Howitt and Cramer, 2005; Munro, 2005).

Interval estimation is a useful parameter to convey the accuracy of information. With interval estimation, researchers construct a confidence interval (CI) which is the range of values within which a population parameter is estimated to lie. Confidence level reflects the degree of risk researchers are willing to take of being wrong. With 95% confidence level, researchers accept the probability that they will be wrong five times out of 100 (Polit and Beck, 2004, pp. 479).

Ethical Considerations

Ethical approval, including Institutional Review Board (IRB) approval was obtained from the University of Jordan Ethical Committee and the Ministry of Education Ethical Committee (see Appendix A). Also school consent was obtained from each school principal and teachers to ensure their willingness to participate in the study.

The informed consent of the parents or legal guardians was obtained prior to data collection. This form stated the purpose of the study, clearly identified that participation in the study is voluntary and that students have the right to withdraw from the study any time. Also, because students in this study are mature enough to understand basic information a written consent was obtained from the students as well. All the students whose parents approved their participation in the study signed a consent form indicating that they could participate in the study. The school counselor accompanied researchers to alleviate any potential psychological harm that may result from answering any of the instrument questions.

Students' anonymity was maintained throughout the data collection process. The questionnaire was prefaced with a cover letter. The cover letter illustrated the purpose of the study, type of data required, the anonymity of the participants, the right to withdraw from the study at any time, contact information of the researcher, and the confidentiality of the data in which no one, except the researcher will have access to the raw data (see Appendix B).

The data saved on the researcher computer and secured with password. The results in the final report presented in a way that the anonymity of the individual student and schools are assured. The questionnaires and any other hard copies related to the study are secured in a locked cabinet and will be kept for five years. The questionnaires were coded by numbers related to school type and grade level and no one except the researcher knows the coding system.

Permission was obtained from the theory developers to use the model to direct the study (see Appendix C). Permission was obtained from the authors to use the questionnaire and to adapt it to Jordanian culture (see Appendix D).

Study Instrument

The international standard version of the HBSC questionnaire was used in this study. The HSBC survey is conducted every four years in participating countries. The international standard version of the questionnaire for each survey year is reached through international cooperation. The questionnaire for 1997/98 survey was used in this study and was adapted for Jordanian culture. The questionnaire consists of two sections core and special foci. The core questions have been used in the four previous surveys of the HBSC study. The core contains: selected demographic questions (age, gender, family structure,

father's and mother's occupation), behavioral questions relevant to major health problems (smoking habits, use of alcohol, dental hygiene, eating habits, physical activity), psychosocial aspects of health, psychosomatic complaints and subjective health. The special focus section of the questionnaire changed over time. In the 1997/98 survey the special focus questions are on the health-related aspects of school and social inequality. All the questions are mandatory (Currie, et al., 1998). The time for the completion of the questionnaire reported by other studies was one class period (40-60) minutes (Al Sabbah, et al, 2007) .The 1997/98 International standard version of the survey questionnaire is presented in Appendix E.

Several research studies were conducted to test the reliability and validity of the HSBC questionnaire. In a study conducted by Liu, et al. (2010) to assess the test-retest reliability of selected items in the Chinese version of the HBSC survey questionnaire in a sample of adolescents in Beijing, the questionnaire showed satisfactory test-retest reliability for most of the selected indicators. Twenty three items concerning physical activity, sedentary behavior, sleep and substance use were evaluated in this study by using the percentage of response shifts and the single measure Intra-class Correlation Coefficients (ICC) with 95% confidence interval (CI) for all respondents and stratified by gender and age. Of all the 23 items evaluated, 6 items (26%) showed a moderate reliability, 12 items (52%) displayed a substantial reliability and 4 items (17%) indicated almost perfect reliability.

Another study conducted by Vereecken and Maes (2003) to assess the reliability and relative validity of the HSBC food-frequency questionnaire (FFQ). Test- retest reliability of the HBSC FFQ was studied and the reported consumption frequencies were

compared with a 24-hour Food Behavior Checklist (FBC) and a seven day Food Diary (FD) to test the relative validity of the instrument. The results revealed that the HBSC FFQ has sufficient reliability and validity.

The reliability of three subscales of the questionnaire was reported by McLellana, et al., (1999). The reported Cronbach α internal consistency for school environment scale, teacher perception scale, and peer perception scale was 0.69, 0.72, and 0.77 respectively. Also Maes and Lievens (2003) reported a Cronbach α internal consistency for school environment subscale, teacher perception scale, and peer perception scale which was 0.90, 0.72, and 0.72 respectively. The scales showed acceptable levels of reliability.

Takakura, et al. (2005) conducted a study to examine how adolescent perception of psychosocial environment is associated with satisfaction with school and health complains among Japanese high school adolescents. The researcher adapted the 1997/98 HSBC questionnaire and translated it to Japanese by a research team that included a bilingual speaker. The content validity of the questionnaire was reviewed by the school principals, teachers, school nurse, and researchers. The reported Cronbach α reliability for school satisfaction subscale and combined teacher and peer subscale was (0.75), (0.76) respectively.

In the current study Cronbach α reliability for school environment subscale, peer support scale, and teacher support scale was (0.69), (0.80), and (0.73) respectively. The scales showed acceptable internal consistency level among their component items.

The questionnaire was translated to Arabic. A committee of experts in community health nursing reviewed the translated questionnaire, performed back translation, validated its content, and checked its appropriateness to Jordanian culture. The ethical committee in

the Ministry of Education deleted two questions regarding alcohol use and tobacco because it considered them too culturally sensitive (see Appendix F).

Students' perceptions of the psychosocial aspect of school environment will be measured using three scales; school environment scale (question number 42) that measures students' perception of school environment (with scores ranging from 5 to 25) lower scores on school environment subscale indicate a positive perception, the students' perception of teachers' support scale (question number 43) (with scores ranging from 4 to 20), and the students' perception of peer support scale (question number 44) (with scores ranging from 3 to 15) lower scores on teachers and peer scales indicate higher level of perceived support. These are five point likert scales ranging from strongly agree to strongly disagree. The school environment scale comprised the statements:" in our school the students take part in making the rules; the students are treated too strictly in this school, the rules in this school are fair, our school is a nice place to be; I feel I belong at this school". The students' perception of teachers' support scale comprised the statements: "I am encouraged to express my own views in my class; our teachers usually treat us fairly; when I need extra help I can get it, my teachers are interested in me as a person". The students' perception of peer support scale comprised the statements:" Most of the students in my class enjoy being together; most of the students in my class are kind and helpful; most other students accept me as I am".

Socioeconomic status was be measured with the ‘Family Affluence Scale (FAS)’ which has been developed by Health Behavior in School Aged Children (HBSC) as an alternative measurement of socio-economic status for adolescents (Currie et al., 2008; Torsheim et al., 2006). The 1997/1998 version of FAS is referred to as FASI (including

car(s), bedroom and holiday(s)) and the 2001/2002 version as FASII (FASI items plus computer ownership) (Currie et al., 2008) .This valid and reliable measure consists of four different items, which are designed to reflect the level of material well-being in families: Does your family own a car (0, 1, 2 or more), do you have your own bedroom for yourself? (No = 0, yes= 1), how many times did you travel away on holiday with your family during the past 12 months? (0, 1, 2, 3 or more), and how many computers does your family own (0, 1, 2, 3 or more). A composite FAS score will be calculated by summing the responses to these four items ranging from 0 (lowest affluence) to 9 (highest affluence). The FASII will be used in this study and will be recoded into tertiles (high SES, medium SES, and low SES).

Pilot Study

The pilot study consisted of 35 students from public and private schools after gaining the approval from the ethical committees. Those students were from the 6th, 7th, 8th, 9th and 10th grades and were not included in the analysis of the final sample. The questionnaire language, format and time needed for completing the questionnaire was assessed (see appendix G). The students reported that the questionnaire is easy to understand, the format is clear and appealing, and the students took (30-45) minutes to complete the questionnaire.

Data Collection

The researcher contacted the schools principals to facilitate the enrollment of study participants. At each school the researcher explained the study purpose and the procedure for data collection to the principal and teachers. The researcher visited the selected schools at two occasions. During the first visit the researcher distributed the parental and student

consent form for the selected classes. The form was signed at home and returned by the student (see Appendix B). In the second school visit the researcher distributed the questionnaire to the students who signed both the parental and the student consent form.

Data were collected through self-administered questionnaire. The researcher and two data collectors distributed the questionnaire on the selected schools. The data collectors were trained before administering the questionnaire. A training manual that included study purpose, data collection instrument, and class instructions was given to data collectors. The researcher gave detailed instructions and guidelines to data collectors on how to maintain confidentiality and how to avoid influencing responses.

Administration of the questionnaire took place in the school classroom and was filled within the class period for all selected classes in the same day. Students were given appropriate verbal instructions by the administrator and a written text (cover letter) at the beginning of the questionnaire. Identical instructions were given to each class. A brief description of the study purpose also was given to students before distributing the questionnaire. After that the students returned the filled questionnaire in a sealed envelope.

Data Analysis

Data was analyzed using the Statistical Package for Social Science (SPSS) version 16. The questionnaires were coded by the researcher. The researcher and two research assistants were responsible for data entry. After entering each questionnaire the research assistants checked the accuracy of the entry immediately to detect any mistakes. Preliminary data screening was done prior to the analysis to identify any potential problems and remedy them.

The outcome variables were the selected health behaviors (physical activity, seat belt use, tooth brushing and nutrition intake) which were dichotomized into healthy and unhealthy groups. Physical activity was dichotomized as those who outside of school hours usually exercised in their free time so much that they got out of breath or sweated for one hour or less per week or those who exercised more frequently. Car seat belt use was dichotomized as those who do not always use a seat belt when seated in a car or those who always do so. Tooth brushing was dichotomized as those who brush their teeth less than daily or once a day or more often. The healthy food intake was measured through the question: How often do you drink or eat any of the following? Fruit, raw vegetables, cooked vegetables, brown bread, whole milk, and skimmed and semi skimmed milk (Never=1; rarely=2; At least once a week, but not every day=3; Once a day=4; More than once a day=5). And the junk food intake was measured through the question: How often do you drink or eat any of the following? Soft drinks, sweets, potato crisps, chips, hamburgers or hot dogs, and coffee (Never=5; rarely=4; At least once a week, but not every day=3; Once a day=2; More than once a day=1). A total score was calculated for the healthy and junk intake ranged from 12 to 60 with a cut point of 26 based on the 60 percentile. Students scored above 26 were considered part of the healthy food intake group while students scored below 26 were considered part of the unhealthy food intake group.

School environment subscales were created by summing the scores of the items comprising each scale. Lower scores on school environment scale indicated positive perception of school environment and lower scores on teachers and peer scales indicated higher level of perceived support. A composite FAS score was calculated by summing the

responses of the four items ranging from 0 (lowest affluence) to 9 (highest affluence). The FAS was recoded into tertiles (high, medium, and low).

Descriptive statistics were calculated to describe the sample and determine the prevalence of the adolescent health behaviors. Correlational analysis (point biserial) was used to explore the relationship between school environment and health behaviors. Bivariate analyses were conducted using Chi-square tests of significance to detect differences in occurrence of health behaviors in relation to demographic characteristics (age, gender, and socioeconomic status) and to school type (private and public) (Warner, 2008; Newton and Rudestam, 1999).Differences were considered statistically significant if the p value was <.05. Phi coefficients were calculated to evaluate the level of association between the health behavior variables and demographic and school type variables. Cronbach α reliability was used to assess the internal consistency of instrument subscales.

Chapter Four

Results

Descriptive Results

A multi-stage cluster sample design was used to draw the study sample. Amman is divided into one private directorate and five public directorates from which the second public directorate was randomly selected. Five public schools, from the second directorate, and two private schools were randomly selected to represent the proportion of education presented by each sector. All selected schools agreed to participate.

The final sample included 1166 adolescents, with 614 girls (52.7%) and 552 boys (47.3%). The majority of adolescents were from the public education sector (60.7%). Twenty questionnaires (1.7%) were incomplete and excluded from the final analysis. The mean age of adolescent was 13.0 years (SD=1.2).

Bivariate Results

First Research Question: Is there a significant relationship between school environment and adolescent health behavior ($\alpha \leq .05$)?

School Environment Subscale and Adolescent Health Behaviors

A point biserial correlation between school environment and healthy and unhealthy tooth brushing groups was obtained. The correlation between school environment and healthy and unhealthy tooth brushing groups was statistically significant, r_{pb} (1164) = .08,

p=.006. The unhealthy tooth brushing group was associated with a higher score on the school environment which means negative perception of school environment (see Table 1).

The correlation between school environment and healthy and unhealthy physical activity, seat belt use, and nutrition intake groups was statistically not significant.

Table 1. Correlations between School Environment Subscales and Adolescents Health Behaviors (N= 1166)

Scale		Physical activity	Seat belt use	Tooth brushing	Nutrition Intake
School environment subscale	r	.005	.044	.08	.026
	P	.855	.136	.006*	.377
Teacher support subscale	r	.08	.045	.077	.029
	P	.004*	.122	.008*	.315
Peer support subscale	r	.021	-.023	.08	.039
	p	.476	.393	.006*	.188

***** Significant correlation P<.05

Teacher Support Subscale and Adolescent Health Behaviors

A point biserial correlation between teacher support subscale and healthy and unhealthy physical activity groups was obtained. The correlation between teacher support subscale and healthy and unhealthy physical activity groups was statistically significant, r_{pb} (1164) = .08, p=.004. The unhealthy physical activity group was associated with a higher score on teacher support subscale which means lower perception of support. In addition,

the correlation between teacher support subscale and healthy and unhealthy tooth brushing groups was statistically significant, $r_{pb}(1164) = .077$, $p=.008$. The unhealthy tooth brushing group was associated with a higher score on the teacher support subscale which means lower perception of support.

The point biserial correlation between teacher support subscale and healthy and unhealthy nutrition intake groups was statistically not significant. Similarly, the correlation between teacher support subscale and healthy and unhealthy seat belt use groups was statistically not significant.

Peer Support Subscale and Adolescent Health Behaviors

A point biserial correlation between peer support subscale and healthy and unhealthy tooth brushing groups was obtained. The correlation between peer support subscale and healthy and unhealthy tooth brushing groups was statistically significant, r_{pb} $(1164) = .08$, $p=.006$. The unhealthy tooth brushing group was associated with a higher score on the peer support subscale which means lower perception of support.

The point biserial correlation between peer support subscale and healthy and unhealthy nutrition intake, physical activity, and seat belt use groups was statistically not significant.

In summary, negative perception of school environment was associated with unhealthy tooth brushing behavior. Lower perception of teacher support at school was associated with unhealthy physical activity and tooth brushing behaviors. Finally, lower perception of peer support at school was associated with unhealthy tooth brushing behavior.

Second Research Question: What is the frequency of selected behaviors among adolescents including physical activity, dental hygiene, nutrition intake, and seat belt use?

Table (2) presents the frequency of unhealthy behaviors by participating adolescents. The unhealthy seat belt use has the highest frequency among the unhealthy behaviors while the unhealthy tooth brushing behavior has the lowest frequency.

Table 2. The Frequency of Unhealthy Behaviors by Participating Adolescents (N=1166)

Unhealthy behavior	Physical activity	Seat belt use	Tooth brushing	Nutrition intake
Frequency	748	1001	547	781
Percent %	64.2	85.8	46.9	67

Table (3) shows the proportion of nutrition intake consumption at least once daily. The consumptions of soft drinks (64.3%) and sweets (83.3%) were high while the consumption of low (33.7%) and whole (38.9%) fat milk was low.

Table 3. Proportion of Nutrition Intake Consumption at least Once Daily (%)

Nutrition Intake	Daily Consumption
Fruit	84
Raw vegetables	82.7
Cooked vegetables	65.4
bread	85.8

Nutrition Intake	Daily Consumption
Low fat milk	33.7
Whole fat milk	38.9
Sweets and candy	83.3
Soft drinks	64.3
Coffee	19.5

Third Research Question: Is there a difference in adolescent health behavior in relation to demographic characteristics (age, gender, socioeconomic status)?

Chi-square test was performed to examine differences in health behaviors in relation to demographic characteristics (age, gender, socioeconomic status).

Health Behaviors and Gender

Chi-square test was performed to examine differences in physical activity behaviors in relation to gender. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 197.9 (see Table 5). Of the 552 boys, 263(47.6%) was part of the unhealthy physical activity group; of the 614 girls 485 (79%) was part of the unhealthy physical activity group. A phi coefficient was calculated to assess the strength of this relationship: $\phi = .326$. This corresponds to a medium –size effect. This was a statistically significant association: X^2 (1) = 1.242, $P<.001$. The nature of the relationship was that girls had a significantly higher proportion in the unhealthy physical activity group (79%) than boys (47.6%).

Table 4.Gender * Physical Activity Behavior Crosstabulation

Gender		Physical activity behavior		Total
		Healthy group	Unhealthy group	
Boy	Count	289	263	552
	% within Gender	52.4%	47.6%	100.0%
Girl	Count	129	485	614
	% within Gender	21.0%	79.0%	100.0%
Total	Count	418	748	1166
	% within Gender	35.8%	64.2%	100.0%

Chi-square test was performed to examine differences in tooth brushing behaviors in relation to gender. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 259 (see table 6). Of the 552 boys, 297(53.8%) was part of the unhealthy tooth brushing group; of the 614 girls 250 (40.7%) was part of the unhealthy tooth brushing group. A phi coefficient was calculated to assess the strength of this relationship: $\phi = -.131$. This corresponds to a small –size effect. This was a statistically significant association: X^2 (1) = 19.992, P<.001. The nature of the relationship was that boys had a significantly higher proportion in the unhealthy tooth brushing group (53.8%) than girls (40.7%).

Table 5.Gender * Tooth Brushing Behavior Crosstabulation

Gender		Tooth brushing behavior		Total
		Healthy group	Unhealthy group	
Boy	Count	255	297	552
	% within Gender	46.2%	53.8%	100.0%
Girl	Count	364	250	614
	% within Gender	59.3%	40.7%	100.0%
Total	Count	619	547	1166
	% within Gender	53.1%	46.9%	100.0%

Chi-square test was performed to examine differences in nutrition intake activity behaviors in relation to gender. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 182.3 (see Table 7). Of the 552 boys, 329 (59.6%) was part of the unhealthy nutrition intake group; of the 614 girls 452 (73.6%) was part of the unhealthy nutrition intake group. A phi coefficient was calculated to assess the strength of this relationship: $\phi = .149$. This corresponds to a small –size effect. This was a statistically significant association: X^2 (1) = 25.812, $P<.001$. The nature of the relationship was that girls had a significantly higher proportion in the unhealthy nutrition group (73.6%) than boys (59.6%).

Table 6. Gender * Nutrition Behavior Crosstabulation

Gender		Nutrition behavior		Total
		Healthy group	Unhealthy group	
Boy	Count	223	329	552
	% within Gender	40.4%	59.6%	100.0%
Girl	Count	162	452	614
	% within Gender	26.4%	73.6%	100.0%
Total	Count	385	781	1166
	% within Gender	33.0%	67.0%	100.0%

Chi-square test was performed to examine differences in seat belt use behaviors in relation to gender. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 78.1. This was a statistically not significant association.

To sum up, there was a statistical difference between boys and girls in relation to physical activity; tooth brushing, and nutrition behavior. Girls have a higher proportion engaged in healthy tooth brushing behavior while boys have a higher proportion engaged in healthy physical activity and nutrition intake behaviors.

Age and Health Behaviors

Chi-square test was performed to examine differences in seat belt use behaviors in relation to age. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 17.1 (see Table 8).of the 169 adolescents aged eleven years 121(21.6%) was part of the unhealthy seat belt group, of the 214 adolescents aged twelve years 190(88.8%) was part of the unhealthy seat belt group, of the 297 adolescents aged thirteen years 258(86.9%) was part of the unhealthy seat belt group, of the 365 adolescents aged fourteen years 323(88.5%) was part of the unhealthy seat belt group, and of the 121 adolescents aged fifteen years 109(90.1%) was part of the unhealthy seat belt group. A phi coefficient was calculated to assess the strength of this relationship: ϕ = .171. This corresponds to a small –size effect. This was a statistically significant association: X^2 (4) = 33.912, P<.001. The nature of the relationship was that adolescents in older age groups had a significantly higher proportion in the unhealthy seat belt use group.

Table 7. Age * Seat Belt Behavior Crosstabulation

Age		Seat Belt Behavior		Total
		Healthy group	Unhealthy group	
11 years	Count	48	121	169
	% within age	28.4%	71.6%	100.0%
12 years	Count	24	190	214
	% within age	11.2%	88.8%	100.0%
13 years	Count	39	258	297
	% within age	13.1%	86.9%	100.0%
14 years	Count	42	323	365
	% within age	11.5%	88.5%	100.0%
15 years	Count	12	109	121
	% within age	9.9%	90.1%	100.0%
Total	Count	165	1001	1166
	% within age	14.2%	85.8%	100.0%

Chi-square test was performed to examine differences in tooth brushing behaviors in relation to age group. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 56.8 (see Table 9). A phi coefficient was calculated to assess the strength of this relationship: ϕ = .119. This corresponds to a small –size effect. This was a statistically significant

association: X^2 (4) = 16.435, P=.002. The nature of the relationship was that older adolescents had a significantly higher proportion in the unhealthy tooth brushing group than younger adolescents.

Table 8. Age * Tooth Brushing Behavior Crosstabulation

Age		Tooth Brushing Behavior		Total
		Healthy group	Unhealthy group	
11 years	Count	106	63	169
	% within age	62.7%	37.3%	100.0%
12 years	Count	111	103	214
	% within age	51.9%	48.1%	100.0%
13 years	Count	161	136	297
	% within age	54.2%	45.8%	100.0%
14 years	Count	194	171	365
	% within age	53.2%	46.8%	100.0%
15 years	Count	47	74	121
	% within age	38.8%	61.2%	100.0%
Total	Count	619	547	1166
	% within age	53.1%	46.9%	100.0%

Chi-square test was performed to examine differences in nutrition intake behaviors and physical activity behaviors in relation to age. There was no statistical significant difference in these behaviors in relation to age.

In summary, Chi-square test revealed that there was no significant difference in nutrition intake behaviors and physical activity behaviors in relation to age. On the contrary, there was a statistically significant difference in seat belt use behavior and tooth brushing behavior in relation to age. Older adolescents tend to engage in unhealthy seat belt use and tooth brushing behaviors than younger adolescents.

Table (9) shows the frequency of unhealthy behaviors by gender and age. The frequency of unhealthy seat belt use increased with age among boys and girls while the frequency of tooth brushing unhealthy behavior increased by age for girls only. In general, (64.2%) of adolescents reported that they exercised 1 hour or less per week outside of school hours in their free time to the extent were they got out of breath or sweated. Insufficient exercise was more common among girls. The frequency of good dental hygiene among adolescents was (54.1%) in which adolescents reported brushing their teeth more than once daily. Girls were more likely than boys across all years to brush more than once daily. Regarding nutrition behavior, (67%) of adolescents consumed unhealthy intake nutrition. Girls were more likely to consume unhealthy intake nutrition than boys.

Table 9. The Frequency of Unhealthy Behavior by Gender and Age (%)

Unhealthy behavior	11 years		12 years		13 years		14 years		15 years	
	boys	girls	boys	girls	boys	girls	boys	girls	boys	girls
Physical activity*	45.7	71.6	46.5	79	44.4	80.1	45.1	80.1	60	87.1
Seat belt use†	71.6	71.6	90.1	88.1	85.7	87.7	88	89	88.9	93.5
Tooth brushing*†	39.5	35.2	64.8	39.9	52.4	40.9	52.2	41.4	63.3	54.8
Nutrition intake*	64.2	76.1	70.4	69.9	53.2	74.3	54.9	74.6	65.6	74.2

***** The behavior differed significantly by gender

† The behavior differed significantly by age

Socioeconomic Status and Student Health Behaviors

Chi-square test was performed to examine differences in physical activity behaviors in relation to socioeconomic status groups. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 33 (see Table 10). of the 609 adolescents in the high socioeconomic status group 363(59.6%) were part of the unhealthy physical activity group, of the 465 adolescents in the medium socioeconomic group 319(68.6%) were part of the unhealthy physical activity group, and of the 92 adolescents in the low socioeconomic status group 66 (71.7%) were part of the unhealthy physical activity group. A phi coefficient was calculated to assess the strength of this relationship: $\phi = .10$. This corresponds to a small –size effect.

This was a statistically significant association: X^2 (2) = 11.78, P=.003. The nature of the relationship was that adolescents in lower socioeconomic status groups had significantly higher proportion engaged in unhealthy physical activity.

Table 10. Socioeconomic Groups * Physical Activity Behavior Crosstabulation

Socioeconomic Groups		Physical activity behavior		Total
		Healthy group	Unhealthy group	
High	Count	246	363	609
	% within Socioeconomic Groups	40.4%	59.6%	100.0%
Medium	Count	146	319	465
	% within Socioeconomic Groups	31.4%	68.6%	100.0%
Low	Count	26	66	92
	% within Socioeconomic Groups	28.3%	71.7%	100.0%
Total	Count	418	748	1166
	% within Socioeconomic Groups	35.8%	64.2%	100.0%

Chi-square test was performed to examine differences in tooth brushing behaviors in relation to socioeconomic status groups. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 43.2 (see table 11).of the 609 adolescents in the high socioeconomic status group 264(43.3%) were part of the unhealthy tooth brushing group, of the 465 students in the medium socioeconomic group 234(50.3%) were part of the unhealthy tooth brushing group, and of the 92 adolescents in the low socioeconomic status group 46 (53.3%) were part of the unhealthy tooth brushing group. A phi coefficient was calculated to assess the strength of this relationship: ϕ = .076. This corresponds to a small –size effect. This was a statistically significant association: X^2 (2) = 6.674, P=.034. The nature of the relationship adolescents in lower socioeconomic status groups had significantly higher proportion engaged in unhealthy tooth brushing.

Table 11. Socioeconomic Status * Tooth Brushing Behavior Crosstabulation

Socioeconomic Groups		Tooth brushing behavior		Total
		Healthy group	Unhealthy group	
High	Count	345	264	609
	% within Socioeconomic Groups	56.7%	43.3%	100.0%
Medium	Count	231	234	465
	% within Socioeconomic Groups	49.7%	50.3%	100.0%
Low	Count	43	49	92
	% within Socioeconomic Groups	46.7%	53.3%	100.0%
Total	Count	619	547	1166
	% within Socioeconomic Groups	53.1%	46.9%	100.0%

Chi-square test was performed to examine differences in nutrition intake behaviors in relation to socioeconomic status groups. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 30.4 (see Table 12).of the 609 adolescents in the high socioeconomic status group 381(62.6%) were part of the unhealthy nutrition intake group, of the 465 adolescents in the medium socioeconomic group 331(71.2%) were part of the unhealthy nutrition intake group, and of the 92 adolescents in the low socioeconomic status group 69 (75%) were part of the unhealthy nutrition intake group. A phi coefficient was calculated to assess the strength of this relationship: $\phi = .10$. This corresponds to a small –size effect. This was a statistically significant association: X^2 (2) = 11.765, P=.003. The nature of the relationship

adolescents in lower socioeconomic status groups had significantly higher proportion engaged in unhealthy nutrition intake behavior.

Table 12. Socioeconomic Status * Nutrition Intake Behavior Crosstabulation

Socioeconomic Groups		Nutrition Intake behavior		Total
		Healthy group	Unhealthy group	
High	Count	228	381	609
	% within Socioeconomic Groups	37.4%	62.6%	100.0%
Medium	Count	134	331	465
	% within Socioeconomic Groups	28.8%	71.2%	100.0%
Low	Count	23	69	92
	% within Socioeconomic Groups	25.0%	75.0%	100.0%
Total	Count	385	781	1166
	% within Socioeconomic Groups	33.0%	67.0%	100.0%

Chi-square test was performed to examine differences in seat belt use behaviors in relation to socioeconomic status. This was a statistically not significant association.

Briefly, adolescents in lower socioeconomic status groups had significantly higher proportion engaged in unhealthy physical activity, tooth brushing, and nutrition intake. There was no significant difference in seat belt behavior in relation to socioeconomic status.

Fourth Research Question: To what extent do adolescent health behaviors vary across school type (private or public)?

Chi-square test was performed to examine differences in physical activity behaviors in relation to school type groups. Expected cell frequencies were examined to see whether there were any expected frequencies less than 5; the smallest expected cell frequency was 164.2 (see Table 13).of the 708 adolescents in public school group 481(67.9%) were part of the unhealthy physical activity group, of the 458 adolescents in private school group 267(58.3%) were part of the physical activity group. A phi coefficient was calculated to assess the strength of this relationship: ϕ = -.098. This corresponds to a small –size effect. This was a statistically significant association: X^2 (1) = 11.24, P=.001. The nature of the relationship adolescents in public schools had significantly higher proportion engaged in unhealthy physical activity behavior.

Table 13. School Type * Physical Activity Behavior Crosstabulation

School Type		Physical Activity Behavior		Total
		Healthy Group	Unhealthy Group	
Public	Count	227	481	708
	% within School type	32.1%	67.9%	100.0%
Private	Count	191	267	458
	% within School type	41.7%	58.3%	100.0%
Total	Count	418	748	1166
	% within School type	35.8%	64.2%	100.0%

Chi-square test was performed to examine differences in seat belt use, tooth brushing, and nutrition intake behaviors in relation to school type. There was no statistical significant difference in these behaviors in relation to school type.

Chapter Five

Discussion

This chapter discusses the study findings and their implications to improve adolescent health in Jordan. It incorporates the following elements in relation to adolescent health behaviors: school environment, teacher and peer support, frequency of selected health behaviors, school type. Also discussed study limitations, implications for practice, administration, recommendation for future research, conclusion and dissemination of findings.

The HPM was used as a framework to guide the study. The study examined the effect of three cognitive variables teacher support, peer support, and school environment on adolescent health promotion behavior. Additionally, it studied the effect of three individual characteristics (age, gender, socioeconomic status) on participation in health-promoting behavior in the domains of physical activity, healthy dietary practices, dental hygiene, and seat belt use.

School Environment and Adolescent Health Behaviors

According to HPM, the situational influences are the individual perceptions and cognitions of the context which may enhance or impede behavior.The perception of the context or situation may facilitate or impede the engagement in the health-promoting behavior. Individuals will engage in positive health-promoting behavior if they feel comfortable in the environment (Tomey and Alligood, 2006).

The results of this study suggest that adolescent health behaviors are associated with the perception they have toward their school environment. These findings confirm the results of previous research studies that linked adolescent behaviors to school environment (Denny et al. ,2010; Fletcher, et al. ,2008; Freeman et al. ,2009; Ma ,2007; Maes and Lievens ,2003; Peltzer, ,2009; Springer, et al. ,2006; Walsh, et al., 2010; and Wu, et al.,2007).

This study focused on psychosocial aspect of school environment which includes peer and teacher support at school and perception school environment through students' involvement in school activities, fairness of rules, and school belonging. Adolescents who had negative perception toward their school environment, and perceived their teachers and peers as unsupportive were more likely to have engaged in unhealthy behaviors compared to adolescents who had more positive views toward their school environment, and perceived their teachers and peers as supportive. These findings are consistent with previous researches that examined psychosocial aspect of school environment (Ma, 2007; Maes and Lievens, 2003; and McLellana, et al., 1999).

Some research studies examined other aspects of school environment. Denny et al. (2010) examined the effect of expectations from people and perceptions of safety at school, in addition to the effect of sense of belonging and having supportive relationships with adults, on risk taking behaviors. Walsh, et al. (2010) found that parental support at school, along with, teacher support and peer relationships that proved to be the significant predictor of risk behaviors and mental health outcomes among adolescents. Another study conducted by Freeman et al. (2009) found that adolescents, who have the most positive relationships

to school outcomes, including academic achievement, truancy, teacher and peer support, also had the most positive emotional health and the lowest incidence of bullying.

The results of the study indicated that a positive perception of school environment was associated with healthy tooth brushing behavior. School environment was not associated with physical activity, nutrition intake, and seat belt behaviors. However, McLellana, et al., (1999), found that, in addition to good dental hygiene, positive perception of school environment was associated with seat belt and bicycle helmet use and less tobacco and alcohol. Similarly, Maes and Lievens (2003) linked positive attitudes toward school environment to healthy tooth brushing and less regular smoking and drinking. In the same way, Anteghini, et al. (2001) linked school connectedness to decrease level of cigarette smoking, drug use, onset of sexual intercourse before age 15, pregnancy, gun-carrying, suicidal ideation, and suicide attempts. Also, Denny et al. (2010) found that schools where adolescents reported a positive school environment had fewer adolescents with alcohol use problems, and fewer adolescents engaging in violence and risky motor vehicle behaviors.

Positive perception of the school environment may increase students' satisfaction about school and their willingness to follow the tooth brushing instructions and oral health messages provided by school curriculum. Many of our schools in Jordan have posters that explain the benefits and the technique for tooth brushing in addition to healthy food important to dental health. According to HPM these features of the school environment will facilitate the adolescents' engagement in the healthy tooth brushing behavior.

Teacher and Peer Support and Adolescent Health Behaviors

According to HPM, interpersonal influences are cognitions related to the attitudes, beliefs, or behaviors of others and it includes; norms, social support, and modeling. Social support affects the individuals' involvement in health-promoting behaviors. Individuals are more likely to commit to and engage in health-promoting behaviors when significant others expect the behavior, model the behavior, and provide support and help to facilitate the behavior (Tomey and Alligood, 2006).

In this study positive perception of teacher support was associated with healthy physical activity and tooth brushing behaviors. No significant association was found between teacher support and seat belt or nutrition intake behavior. Similarly, Maes and Lievens (2003) found that supportive teacher relations associated with healthy tooth brushing behavior and lower smoking and drinking. In addition, Walsh, et al. (2010) found that teacher support was related to higher mental well-being and lower smoking and drinking. Also, McLellana, et al., (1999) found that positive perception of teacher support is associated with lower alcohol and fast food consumption, seatbelt and bike helmet use. Freeman et al. (2009) linked teacher support to positive emotional health and lower incidence of bullying. Anteghini, et al.(2001) as well found that teacher support was related to lower level of cigarette smoking, drug use, onset of sexual intercourse before age 15, pregnancy, gun-carrying, suicidal ideation, and suicide attempts.

Good student-teacher relationship could lead to students' involvement in healthy behaviors by teacher encouragement and positive reinforcement of student engagement in the healthy behavior. Also, the teachers could provide a role model for their students by

engagement in healthy behaviors. When students have close relationship with their teacher this will consequently encourage them to model their teachers. According to HPM providing emotional support to the students and modeling the healthy tooth brushing and physical activity for them will create and incentive for the adolescents to be engaged in these healthy behaviors.

Findings of this study revealed that positive perception of peers support was associated with healthy tooth brushing behavior. Peer support was not associated with physical activity, nutrition intake, and seat belt behaviors. However, Ma (2007) found that positive peer relations at schools are effective in promoting healthy nutrition behaviors. Additionally, Freeman et al. (2009) reported that adolescents who had higher level of peer support had the most positive emotional health and the lowest incidence of bullying. In the same way, Anteghini, et al. (2001) associated peer connectedness to decrease level of cigarette smoking, drug use, onset of sexual intercourse before age 15, pregnancy, gun-carrying, suicidal ideation, and suicide attempts. On contrary, McLellana, et al., (1999) found that negative perceptions of peer support was positively associated with infrequent exercise but negatively associated with smoking tobacco and alcohol use. That is, adolescents who reported less peer support were less likely to smoke or drink alcohol. Consistently, Wu, et al. (2007) found that peer relationships were risk factor that increased substance use. Walsh, et al. (2010) also found that for adolescents peer relationships lead to higher level of substance.

Peers are an important aspect of adolescents' life since they spent a lot of time together whether at school or after school. Peers engagement in healthy tooth brushing

behavior could encourage the adolescent to be engaged in this behavior. Furthermore, the adolescent could exhibit this behavior out of competition with his peers. Interpersonal influences by peers through modeling the behavior will increase the probability of adolescent engagement in the behavior according to HPM.

Frequency of Health Behaviors

The next part of this chapter discusses the frequency of four health behaviors tooth brushing, physical activity, seat belt use, and nutrition intake. The frequency of each health behavior will be discussed according to three individual characteristics (gender, age, and socioeconomic status). The HPM proposes that individual characteristics and experiences affect individuals' perceptions about participation in health-promoting behaviors. Individual characteristics include behavioral factors and personal biological, psychological, and socio-cultural factors (Tomey and Alligood, 2006).

Tooth Brushing Behavior

Tooth brushing is important to the maintenance of gum health and prevention of plaques. The recommended frequency for tooth brushing is twice a day (Löe, 2000). This study revealed that (54.1%) of the adolescents brushed their teeth more than once daily. This finding is consistent with previous national data, where Haddad, et al. (2009) reported that (52.8%) of the adolescents in their study brushed teeth once a day. Based on the findings of GSHS that conducted in Jordan in 2007, the percentage of adolescents who did not clean or brush their teeth during the past 30 days was (25.3%) (Center for Disease Control and Prevention, 2007).

The frequency of healthy dental behavior among Jordanian adolescents is low compared to adolescents in Australia, Canada, Europe, and America. In one study conducted in Australia by McLellana, et al., (1999), the prevalence of good dental hygiene among adolescents was high, with (94%) of adolescents brushing their teeth daily or more frequently. Another study conducted by Ma (2007) showed that the estimated probabilities for the typical Canadian adolescent on the practice of dental hygiene was (67%) likely in Grade 6, (62%) likely in Grade 7, (64%) likely in Grade 8, (72%) likely in Grade 9, and (70%) likely in Grade 10 to brush teeth at least twice daily. Currie et al. (2008) reported that across HSBC countries, the average of brushing teeth more than once a day for adolescents aged 11 was (61%), for adolescents aged 13 was (62%), and for adolescents aged 15 was (64%).

The frequency of healthy dental behavior among Jordanian adolescent is high compared to adolescents in other Arab countries. In a study conducted in Lebanon in 2005, (35%) of adolescents brushed their teeth more than once a day (Center for Disease Control and Prevention, 2005).

In this study girls tend to brush their teeth more than boys. Also, according to GSHS conducted in Jordan, boys (30.6%, n=2,197) are more likely than girls (19.3%, n=2,197) to not clean or brush their teeth .Similarly, Ma (2007) found that girls are more likely to brush teeth and floss teeth than boys, with the gender gap increasing consistently across grade levels. Also, Maes and Lievens (2003) found that the odds for regular tooth brushing are higher for girls than boys. In addition, McLellana, et al., (1999) found that girls are more likely to brush their teeth at least daily. Also, Currie et al. (2008) reported that rates of tooth brushing more than once a day are consistently higher among girls than boys across all

three age groups (11, 13, and 15). This gender difference is significant in all HSBC participating countries. Furthermore, boys (14.9%) were more likely than girls (9.9%) to not clean or brush their teeth according to GSHS that was conducted in Lebanon (Center for Disease Control and Prevention, 2005).

The high proportion of girls who brushed their teeth compared to boys can be explained by the fact that girls consider teeth as part of their aesthetic appearance. Girls are more concerned about their beauty more than boys this provides them with a motive to be engaged in the behavior. Girls think that they could benefit from engagement in healthy tooth brushing behavior by maintaining their beautiful look. As a result, this will lead them according to HPM propositions to engage in this behavior.

This study found that there is a decrease in tooth brushing behavior when age increase. Similarly, in a study conducted in Lebanon in 2005, percentage of adolescents brushed their teeth more than three times per day ranged from (43%) in 7th grade to (26%) in 9th grade (Center for Disease Control and Prevention, 2005).On the contrary, McLellana, et al., (1999) revealed that compared with younger adolescents older adolescents were more likely to brush their teeth daily. Consistently, Currie et al. (2008) reported that there is a significant increase in tooth brushing between ages 11 and 15 for both genders.

Age is one of the biological characteristics that affect the adolescents' engagement in healthy tooth brushing behavior according to HPM. The decrease in the healthy behavior by age could be because they become more independent. Parental influence decrease as adolescent move toward adulthood this may be a reason why healthy tooth brushing decrease with age.

In this study there was a significant decrease in tooth brushing in lower SES groups. Similarly, Currie et al. (2008) found that lower levels of tooth brushing are significantly associated with lower SES; this was true for both boys and girls in almost all HSBC countries.

Socioeconomic status is an individual factor that affects the engagement in health promoting behavior as proposed by HPM. The decrease in tooth brushing in lower SES groups may be because those adolescents lack social pressure by their families to carry the behavior. Those families are less concerned about the health or aesthetic aspect of this behavior. In addition, those students may lack the equipment necessary for this behavior at home.

Physical Activity

It is recommended that adolescents participate in at least 60 minutes of moderate-to-vigorous physical activity (MVPA) daily (United States Department of Health and Human Services, 2008). In general, (64.2%) of adolescents reported that they exercised one hour or less per week outside of school hours in their free time to the extent were they got out of breath or sweated, which means that the majority of adolescents in this study reported insufficient exercise. This result is consistent with previous Jordanian studies. In their study, Haddad, et al. (2009) reported that (66.4%) of their sample did not meet the criteria of a minimum of 20 min of exercise six or more times a week. Similarly, the findings of the 2007 GSHS indicated that (83.5%) of adolescents participated in insufficient physical activity (Center for Disease Control and Prevention, 2007).

Consistent results found for adolescents in Euro-American countries and South Africa. The results of cross national comparison by Currie et al. (2008) showed that the

average of MVPA daily was (26%), (20%), and (16%) for the age groups 11, 13, and 15 respectively. Another study conducted by Peltzer, K. (2009) in four African countries (Kenya, Namibia, Uganda, and Zimbabwe) revealed that only (35%) of the participants were physically active for at least 60 min per day for three or more days a week.

Similar results also found in Middle Eastern countries .In a study conducted in Palestine by Al Sabbah et al. (2007) found that only (20% n= 8885) of study sample were doing physical activity five days or more during the past week or the usual week.

The insufficient physical activities can be explained by the lack of facilities to exercise outside schools. Although, many public centers and schools provide play ground to the public but they only provide a space without equipment or organization of the activities. Jordan as many of the developing countries cannot allocate enough money to build public facilities. This highlights the role of civil organizations in providing financial support for initiation of such facilities that provides opportunities for adolescents to enjoy their time and promote their health in the same time.

Boys in this study exercised outside school hours more frequently than girls. This result is consistent with previous research findings which revealed that boys are more physically active than girls (Al Sabbah et al., 2007; Center for Disease Control and Prevention, 2007; Currie et al., 2008; and Peltzer, K., 2009).

The lack of girls' physical activity could be a cultural issue, since playing sports by females are not culturally acceptable as their male counterparts. Females have more family responsibilities and do not have as much time to participate in sports as boys. Boys' willingness to be strong to satisfy their masculine body image and to protect themselves could be another reason that motivates boys to be physically more active.

In the current study there was no significant difference in physical activity behaviors in relation to age. However, Currie et al. (2008) found that there was a tendency for higher reporting of daily MVPA among younger adolescents for girls and boys. Similarly, Al Sabbah et al. (2007) found that both boys and girls reported less physical activity with increasing age.

Our study found that adolescents from low SES families had significantly higher proportion engaged in unhealthy physical activity. Similarly, Currie et al. (2008) found that there was a significant association between low SES and lower prevalence of daily MVPA in less than half of HSBC participating countries. Also, McLellana, et al., (1999) found that high SES was associated with more frequent exercise outside of school.

Adolescents from low SES families may lack the access to safe play grounds and equipment. Sometimes they do not have reliable transportations to these play spaces. Furthermore, those adolescents usually lack the free time to participate in sport due to a job or family responsibility.

Seat Belt Use

Seatbelt use when travelling by a car is mandatory by law in Jordan. The legislation of this behavior determined it's recoding into always and not always. Not using seat belt while travelling by car had the highest frequency among the unhealthy behaviors with (85.8%) of adolescents reported that they did not always wear seat belt.

The prevalence is extremely high compared to adolescents in Australia, and United States. In a study conducted by McLellana, et al., (1999) in Australia the majority of the sample (83%) reported wearing seat belts always when travelling by car. Similarly, Briggs

et al. (2008) reported that (59% n=12,731) of adolescents aged 16 through19 in the United Stat always used seatbelts when driving, and only (42%) always buckled up as passengers.

Compared to adolescents in the Lebanon the frequency is almost the same. The results of the GSHS in Lebanon revealed that (14.3%, n=5,115) of adolescents report using a seat belt most of the time or always when riding in a car or other motor vehicle driven by someone else during the past 30 days (Center for Disease Control and Prevention,2005). Compared to adolescents in Kuwait the frequency of seat belt non use is high. The results of a study conducted in Kuwait revealed that (81.9%, n= 1467) of adolescents included in the study reported that they always traveled belted (Koushki and Bustan, 2006).

The lower rates of seat belt use may be because adolescents are not convinced in the safety benefits of seat belt use or are not concerned with avoiding risk. Parents and peers could provide another explanation for these results. Those adolescents may lack the models of regular seat belt use or lack the social pressure to use seat belts. Parents play influential role in enhancing this behavior starting from infancy through childhood and adolescence stages.

In this study no statistical difference was found between boys and girls related to seat belt use behavior. However, McLellana, et al., (1999) reported that girls are more likely to always wear a seat belt than boys. Similarly, Koushki and Bustan, (2006) found that only (18.2%, n= 1467) of sample males and (64%, n= 1467) of the female samples always traveled belted.

There was a statistically significant difference in seat belt use behavior in relation to age. Adolescents at higher age tend to not use seat belt when travelling than adolescents in lower age groups. Similarly, Lebanon GSHS revealed adolescents in the 7th grade (18.8%)

were more likely to report wearing a seat belt most or all of the time than adolescents in the 8th (12.8%) or 9th (10.0%) grades (Center for Disease Control and Prevention, 2005).

In this study there was no significant difference in seat belt behavior in relation to SES. However, McLellana, et al., (1999) found that having high SES was associated with infrequent car seat belt use.

Nutrition Intake

In this study (67%) of the adolescents consumed unhealthy intake of nutrition. The proportion of adolescents who daily consumed fruit was (84%), raw vegetables (82.7%), cooked vegetables (65.4%), bread (85.8%), low fat milk (33.7%), whole fat milk (38.9%), sweets and candy (83.3%), soft drinks (64.3%), and coffee was (19.5%).

Compared to previous research about nutritional habits of Jordanian adolescents conducted by Haddad, et al. (2009), which found that the proportion of adolescents who daily consumed fruit was (77.5%), vegetables (81.7%), bread or rice (76.1%), milk (81.8%), meat (62.1%), sweets and candy (69.3%), and soft drinks was (64.7%), there is a lower consumption of milk and a higher consumption of sweets among this sample.

According to GSHS that was conducted in Jordan in 2007, the percentage of adolescents who reported daily consumption of fruit was (69.2%), vegetables (77.5%) milk (35.8%), and soft drinks was (38.1%) (Center for Disease Control and Prevention, 2007). Compared to the GSHS the consumption of soft drink in this current sample was higher.

Other researchers found that the average daily fruit consumption among age groups 11, 13, and 15 was (41%), (35%), (30%) respectively, the average daily vegetable consumption among age groups was (34%), (32%), (30%) respectively, and the average daily soft drinks consumption among age groups was (22%), (27%), (28%) respectively.

Compared to adolescents in HBSC participating countries, the consumption of fruit, vegetables, and soft drinks among Jordanian adolescents was high (Currie et al., 2008).

In 2007 Al Sabbah et al. studied nutritional habits among Palestinian adolescents and found that the proportion of daily consumption of fruits was (31%), vegetables (45%), milk (22%), sweets (35%), and soft drinks was (24%). Compared to Palestinian adolescents, Jordanian adolescents have a higher consumption of fruits, vegetables, milk, sweets, and soft drinks.

The results of GSHS in Lebanon revealed that the percentage of adolescents who reported daily consumption of fruit was (79%), vegetables (74.4%), cereals and carbohydrates (45.6%), milk or ate milk products (35.9%), and carbonated soft drinks was (33%) (Center for Disease Control and Prevention, 2005).Compared to Lebanon adolescents Jordanian adolescents has a higher consumption of fruit, vegetables, bread as a source of carbohydrate and soft drinks.

The results of this study revealed that there is a high consumption of soft drinks and sweets and a low consumption of milk. This could be explained by the availability and accessibility of soft drinks and sweets at schools, homes, shops, and restaurants. Televisions commercials are another aspect that enhances adolescents' consumption of sweets and soft drinks. The high consumption of soft drinks accompanied by low consumption of milk seriously affects the bone structure of adolescents and increases the risk for bone fractures. Also, the high consumption of sweets and soft drinks along with insufficient physical activity increase the risk for obesity which considered a risk factor for many non-communicable diseases. The Jordanian government started school nutritional project since 1999 in an effort to provide a healthy breakfast for students at schools.

However, the project includes only some schools in some areas of the kingdom and the expansion in this project depends on the financial support that is not available.

In current study girls were more likely to consume unhealthy intake of nutrition than boys. In contrary, Currie et al. (2008) found that girls at all ages in most HBSC countries are more likely to eat fruit daily and less likely to consume soft drinks than boys. Also, Al Sabbah et al. (2007) found that girls reported more daily consumption of fruit, vegetables and sweets than boys, and less consumption of soft drinks, milk, meat and chicken. In the same way, Ma (2007) found that boys are more likely to consume junk food than females. Also, Lebanon GSHS revealed that boys (31.6%) were more likely to eat fast food than girls (23.6%), however, it found that boys (27.6%) were more likely than girls (21.9%) to eat fruits and vegetables, also boys (38.5%) were more likely than girls (33.6%) to drink milk or eat milk products, and boys (39.6%) more likely to drink carbonated soft drinks than girls (27%) (Center for Disease Control and Prevention, 2005).

In this study there was no significant difference in nutrition intake behaviors in relation to age. However, Currie et al. (2008) found that daily fruit consumption drops significantly between ages 11 and 15 in most HBSC countries and there is a general tendency for soft drinks consumption to increase between ages 11 and 15 which means that unhealthy food consumption increase with age. Also, the GSHS in Lebanon revealed that adolescents in the 7^{th} grade (83.2%) were more likely to report eating fruits than adolescents in the 8^{th} grade (77.1%) or in the 9^{th} grade (75.4%), also adolescents in 7^{th} grade (28.4%) were more likely to report eating vegetables than adolescents in 8^{th} grade (23%) or in 9^{th} grade (21.5%), and adolescents in the 7^{th} grade (37.9%) were more likely to

drink milk or eat milk products than those in the 9th grade (32.4%) (Center for Disease Control and Prevention, 2005).

The current study found that adolescents from low SES groups had significantly higher proportion engaged in unhealthy nutrition intake. Similarly, Currie et al. (2008) found that low SES is significantly associated with lower levels of fruit consumption and high level of soft drink consumption. In same way, Richter et al., (2009) found that daily fruit and vegetable consumption was less common among adolescents from low SES families than among their high SES counterparts.

The high proportion of adolescents from low SES groups engaged in unhealthy nutrition intake can be explained by the in availability of healthy food at home because they are not able to afford it. Unhealthy nutrition such as soft drinks are more accessible and costless compared to healthy food. Lack of family guidance may be another reason since those adolescents should not be fully responsible about their health.

School Type and Adolescent Health Behaviors

This study revealed that adolescents in public schools had significantly higher proportion engaged in unhealthy physical activity behavior compared to adolescents in private schools. There was no significant difference in seat belt use, tooth brushing, and nutrition intake behaviors in relation to school type. Similarly, Valois, et al. (1997) found that public school adolescents differed significantly from private school adolescents in the prevalence of risk behaviors. public high school adolescents reported higher prevalence of alcohol use, driving after drinking, and binge drinking; smoking cigarettes (past 30 days); chewing tobacco (males only); marijuana use during the past 30 days (females only); and

use of alcohol or other drugs before last act of sexual intercourse than private school adolescents. On contrary, Penhollow and Young (2005) found that private high school adolescents reported higher prevalence rates for driving after drinking alcohol, cigarette and alcohol use (males), binge drinking, and life satisfaction; while public adolescents had higher prevalence rates for physical fighting and suicide (females), gang activity, sexual intercourse, and condom use at last sexual intercourse. Consistently, the results of GSHS conducted in Lebanon in 2005 indicated that adolescents in private schools were more likely to report current alcohol use than adolescents in public schools. Public school adolescents were more likely not to brush their teeth and to report eating fruits and vegetables (five or more times per day) than private school adolescents (Center for Disease Control and Prevention, 2005).

Adolescents seem to engage in considerable health-risk behavior regardless of the type of secondary institution attended. The attendance of private institutions is not prophylactic against adolescent engagement in risk behaviors.In current study, the higher prevalence of physical activity among private school adolescents perhaps due to greater access to economic resources as private school adolescents are usually from high SES families. Further studies are needed to investigate the effect of school type on adolescent health behavior.

Conclusion

These findings suggest interventions that target the school environment and aim to improve the relational supports with teachers and peers could improve positive health behaviors and well-being outcomes among adolescents. The study indicated that there are

problems with Jordanian adolescents' physical activity, nutrition intake, seat belt use, and tooth brushing behaviors. There was a clear difference between girls and boys related to some health behaviors. This difference does not mean that boys are healthier than girls or vice versa. However, this result stresses the need for appropriate policies that can fulfill the different needs of each gender in culturally appropriate manner. The lack of girls activity could be cultural and also due to role and responsibilities in the family. In this study older adolescents were more likely to report negative health behaviors than younger adolescents, perhaps because they are becoming more independent. This is alarming since older adolescents are in the transition phase toward adulthood. Thus, efforts should be made to establish and maintain healthy behaviors throughout adolescence years to facilitate healthier transition toward adulthood. Adolescents in lower socioeconomic classes are more likely to engage in unhealthy behaviors. Attention should be given to those adolescents in order to achieve health equality.

Study Limitations

The study sample might have missed a portion of out-of-school Jordanian adolescent population. In addition, adolescents in other areas of Jordan were not represented in this sample.

The design chosen for this study is cross sectional approach. Therefore, we cannot infer causality to any of the associated factors in the study. In order to accurately study adolescent health behaviors and factors that influence them a longitudinal approach should be employed, however; this approach is very expensive and presents problems in locating

and accessing students over time. In addition, cross sectional design is necessary to stimulate future efforts of longitudinal designs.

Data was collected through self-administered questionnaire thus there is a risk for response biases but this was probably minimized by the fact that study participants completed the questionnaires anonymously.

In Jordan a lot of cars lack the seat belt in the back seat. Adolescents are usually seated in the back when traveling by a car. Although the item that asks about seat belt use has an option "usually there is no seat belt where I sit", but may be the students did not understand this well and just pick the option that they not always wear seat belt while it is actually not available. Thus, non seat belt use had higher frequency compared to other behaviors.

Implications for Ministry of Education

This study informs policy makers, educators of health professionals, teachers and school administrators of the value that a positive school environment has on adolescent health behaviors. Community health nurses could play an important role in promoting healthy life styles especially at school settings. Unfortunately, we do not have school health nurses in Jordan. The Ministry of Education should consider the initiation of school health nurse in Jordan.

School staff contribute to the development of positive perception of school environment, peer support, and teacher support by (a) creating a positive peer environment by implementing awareness programs, development of positive social circles, and reward programs; (b) improving sense of belonging to school among students with measures such

as arranging field trips, supervising younger students in lower grade levels, and contributing special talents to school events; (c) working towards a safe school disciplinary environment with clear and fair rules (with involvement of students in the development of school rules); (d) working with administrators and nutrition experts to develop healthy menus in school.

The Ministry of Education should consider professional development workshops to alert teachers to the prevalence of unhealthy behaviors among students throughout adolescence.

Recommendation for Future Research

Studies using longitudinal designs are needed to examine adolescent health behaviors over time and factors that affect them. Also, experimental research could test whether interventions that promote stronger student–teacher relations, student-student interaction, and positive perception of school environment could actually cause adolescents to engage in healthy rather than risky behaviors.

Conducting the study in other cities and including schools that are located outside major cities is needed. Further studies are needed to examine family and peers role in adolescents' engagement in healthy behaviors.

Dissemination of Findings

This thesis will be available at the University of Jordan library both in soft and hard copies. The results of this study will be published in research journals. A copy of the research findings will be sent to responsible people in the Ministry of Education and Health. The research will be submitted for presentation in national and international

conferences. The results will be presented to school staffs, parents, and students. Finally, there is an opportunity to disseminate findings through HSBC web site by participating as HSBC linked project.

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Appendices

Appendix A: Ministry of Education Approval

بسم الله الرحمن الرحيم

وزارة التربيـــة و التعليـــم
مديرية التربية والتعليم لمنطقة عمان الثانية

الرقم :
التاريخ :
الموافق :

مديري المدارس ومديراتها

الموضوع : البحث التربوي

تقوم الطالبة عبير شاهين من طلبة برنامج دكتوراه في كلية التمريض بالجامعة الأردنية ، تقوم بإعداد أطروحة بعنوان:-

"The Effect of School Environment on the Health Behaviours of Jordanian A dolescents in Amman City"

وتحتاج إلى توزيع الاستبانة المرفقة على طلبة مدارسكم.

يرجى تسهيل مهمة الطالبة المذكورة أعلاه و تقديم المساعدة الممكنة لها .

واقبلوا الاحترام ،،

/ مدير التربية والتعليم

د. سناء الحوراني
مدير الشؤون الإدارية والمالية

– نسخة / مدير الشؤون التعليمية و الفنية
– نسخة / رئيس قسم التدريب و التأهيل و الإشراف التربوي
– نسخة / كاتب الإشراف
– نسخة / الديوان
م.ر 3/30

هاتف : ٤٦٤٦٣٠٤ ، فاكس: ٤٦٣٧٨٤٤ ، ص.ب ٩٦٥٠ جبل الويبدة ، الموقع الالكتروني http://www.moe.gov.jo/dir/AMMAN2/index.htm

بسم الله الرحمن الرحيم

وزارة التربية والتعليم

مديرية التربية والتعليم الخاص في محافظة العاصمة

الرقم خ ٦/١/٢٧٧٥
التاريخ ٢٥-٤-١٤٣٢
الموافق ٢٠-٣-٢٠١١

مديري ومديرات المدارس الخاصـــــــة

الموضوع : البحث التربـــــــوي

السلام عليكم ورحمة الله وبركاته ،،،

إشـــارة لكتـــاب رئيس الجامعـــة الأردنيـــة رقـــــم ١٦٥٥/٧/١/١١ تاريخ ٢٠١١/٣/٢٨

تقوم الطالبة عبير شاهين من طلبة برنامج دكتوراه في كلية التمريض بالجامعة الأردنيـــة بإعـــداد أطروحة بعنوان :

" The Effect of School Environment on the Health Behaviours of Jordanian A dolescents in Amman city"

ويحتاج ذلك إلى توزيع استبانة على طلبة مدارسكم

يرجى تسهيل مهمة الطالبة المذكورة وتقديم المساعدة الممكنة لها.

واقبلوا فائق الاحترام ،،،

مدير التربية والتعليـــــــم

مدير التربية والتعليم الخاص
سلوى أحمد أبومطر

نسخة / مدير الشؤون التعليمية والفنيـــــــــة
نسخة / رئيس قسم التدريب والتأهيل والإشراف التربوي
نسخة / الطالبة المعنيــــــــــة
نسخة / الملف العـــــــــــام
ع.ش ٣/٣٠

المملكة الأردنية الهاشمية
عمان - جبل الحسين – هاتف : (٤٦٤٠٠٢٣) فاكس: (٤٦٤٩٦٠٢) ص.ب : (٨٣٠٠) البريد الالكتروني : (md.cdpe@moe.gov.jo)
الموقع الالكتروني: (www.moe.gov.jo)

Appendix B: Cover Letter and Consent Form

Cover Letter

أخي الطالب/أختي الطالبة:

أنا الطالبة عبير محمد شاهين ، طالبة دكتوراة في الجامعة الأردنية. أرغب في إجراء دراسة لمعرفة أثر البيئة المدرسية على السلوكيات الصحية للطلبة في مرحلة المراهقة.

عنوان الدراسة: أثر البيئة المدرسية على السلوكيات الصحية لدى الطلبة المراهقين في مدينة عمان.

الطلبة في مرحلة المراهقة عرضة للكثير من المخاطر الصحية التي قد يكون لها الأثر على صحة الفرد في المستقبل. الهدف من الدراسة هو استحداث قاعدة بيانات حول الممارسات الصحية للطلبة في مرحلة المراهقة وأثر البيئة المدرسيةعلى هذه السلوكيات.

أخي الطالب/أختي الطالبة, لقد تمت دراسة سلوكيات صحة المراهقين والعوامل التي تؤثر في هذه السلوكيات على مستوى العالم. ومع ذلك، القليل من المعلومات متوفرة حول العلاقة بين البيئة المدرسية وسلوكيات المراهقين الصحية في الأردن. مشاركتك ستساعد في تحديد مدى انتشار السلوكيات الصحية للطلبة المراهقين و علاقتها بالبيئة المدرسية من أجل تطوير البرامج التعزيزية و الوقائية للطلبة في الأردن ، وتقييم فعالية المناهج المدرسية فيما يتعلق بالتثقيف الصحي لتحديد المجالات التي تحتاج مزيدا من الاهتمام. نتائج هذه الدراسة سوف تساعد واضعي السياسات على وضع السياسات المرتكزة على الأدلة التي تؤثر في السلوك الصحي وسيعززمن مساهمة التعليم في تحسين صحة المراهقين مما يضمن حماية و حياة أطول لهم.

لذا نرجو التعاون معنا لتعبئة هذا الإستبيان علما بأن هذه البيانات سوف تعامل بسرية تامة و لن يتم الاطلاع عليها إلا من قبل الباحث نفسه. إن مشاركتك في الدراسة اختيارية ولا داعي لكتابة اسمك أو أي علامة تدل على مشاركتك، و لك كامل الحق بالانسحاب من الدراسة متى تشاء.

إذا كانت لديك أية أسئلة أو استفسارات فلا تتردد بالاتصال بالباحثة

شاكرين لكم حسن تعاونكم معنا

عبير محمد شاهين   هاتف: 0788298518

نموذج موافقة على المشاركة في الدراسة

عنوان الدراسة: أثر البيئة المدرسية على السلوكيات الصحية لدى الطلبة المراهقين في مدينة عمان

الباحث الرئيسي: عبير محمد شاهين \طالبة دكتوراة كلية التمريض- الجامعة الاردنية

هاتف: 0788298518 بريد الكتروني: Abeer_shahen@yahoo .com

المشرف الرئيسي : د. سميحة جراح

بريد الكتروني: jarrahs@ju.edu.jo

اخي المشارك لك الحق أن ترفض المشاركة في هذا البحث في أي وقت فمشاركتك في هذا البحث إراديةً ، كما يحق لك الانسحاب من الدراسة في أي وقت من دون ابداء الأسباب أو تحمل أي مسؤولية.الرجاء قراءة هذا النموذج بعناية ، وإذا كان لديك أي استفسار أو سؤال لا تردد في طرحه على الباحثة.

الهدف من الدراسة:-

استحداث قاعدة بيانات حول الممارسات الصحية للطلبة في مرحلة المراهقة وأثر البيئة المدرسيةعلى هذه السلوكيات من أجل تطوير البرامج التعزيزية و الوقائية للطلبة في الأردن، و حماية صحة المراهقين، و تجنب المعاناة و حدوث الأمراض المزمنة مستقبلا.

الخصوصية:

جميع المعلومات المعطاة من قبلك ستستخدم لغايات الدراسة فقط و ستعامل بسرية تامة، و لن يسمح لأحد الوصول اليها باستثناء الباحث نفسه.و سوف يتم إتلاف البيانات بعد الحصول على نتائج الدراسة.

المخاطر المترتبة على مشاركتك فى هذه الدراسة:-

لا يوجد هناك أي مخاطر نتيجة مشاركتك في هذه الدراسة . يمكنك الاعتذار عن أي سؤال تنزعج من اجابته.

المنافع التى من الممكن الحصول عليها من هذه الدراسة:-

نتائج هذه الدراسة سوف تساعد الممرضين و العاملين في الحقل الطبي على وضع السياسات لمواجهة المخاطر التي تواجه طلبة المدارس في مرحلة المراهقة.

توقيعك على هذا النموذج يعني أنك قرأت وفهمت المعلومات المذكورة فيه وأن جميع إستفساراتك قد تم الإجابة عليها . وأنك قررت المشاركة في الدراسة .

توقيع ولي أمر الطالب:.............................. **التاريخ:...**

توقيع المشارك:.......................................

Appendix C: Permission to Use the "Health Promotion Model"

Re: Request to use the health promotion model

Sunday, January 16, 2011 9:06 PM

From:

"Nola Pender" <npender@umich.edu>

View contact details

To:

"abeer shahen" <abeer_shahen@yahoo.com>

Message contains attachments

2 Files (179KB) | Download All

- HPM - HEALTH PROMOTION MANUAL Rev 9-2010.doc
- HPM Model Slide Proportioned Correctly.ppt

File: HPM Model Slide Proportioned Correctly.pptDownload File

Dear Abeer:

You have my permission to use the Health Promotion Model in your work. I wish you great academic success. Please see the attached Health Promotion Model Manual. Please contact me if you need additional assistance.

Wishing you good health,

Nola Pender

Quoting abeer shahen <abeer_shahen@yahoo.com>:

> Dear Dr Pender,
> I am Abeer Shahen, a nursing PhD candidate in the University of Jordan..
> am conducting a study entitled " The Impact of the School Environment on the Health Behavior of the Adolescents’ School Student in Amman city " i would like to use your "Health Promotion Model" to enrich my study, i would like to take the permission to use the model from you .
> thank you for your cooperation
> Abeer M. Shaheen

Appendix D: Permission to Use HSBC 1997/98 Questionnaire

Re: Permission to use HBSC instrument

Thursday, February 24, 2011 5:21 PM

From:

"Ashley Theunissen" <atheunie@staffmail.ed.ac.uk>

View contact details

To:

"abeer shahen" <abeer_shahen@yahoo.com>

Mr. Shahen,

Thank you for your reply. I just want to clarify that the new 2009/10 protocol was written by the same group that wrote the 1997/98 protocol. The only changes are that it has been updated for the recent survey in 2009/10.

If you do not want to use the most recent survey, we can grant our permission for use of the 1997/98 protocol. However, you must agree to several terms and conditions. Firstly, the HBSC items must be cited to recognise our copyright. Secondly, you shall agree not to use HBSC or WHO logos on the questionnaire. Finally, you should not refer to yourselves as the HBSC Network. Can you please confirm via email that you will cite the questions appropriately, not use HBSC or WHO logos, and not refer to yourselves as the HBSC Network or HBSC Network member.

Also, we would like you to be an HBSC Linked Project. This status, amoung other things, would mean that we would promote your work on our HBSC website. We are very interested in the work you are doing in Jordan and would like you to apply to be an HBSC Linked Project. If you agree, I will send you the registration form in the next few weeks.

Please let me know if you agree to the above terms and conditions regarding the use of the 1997/98 protocol and please let me know if you are interested in becoming an HBSC Linked Project.

Kind Regards,
Ashley Theunissen

On 24/02/2011 14:40, abeer shahen wrote:

dear Ms Ashley,

Thank you very much for your reply. I want to use the 1997l1998 questionnaire and i will follow the guidelines in the 1997/1998 protocol. the 1997/1998 questionnaire was developed by a protocol task group that is composed of many members. i did not know whom to contact to obtain the permission. the copy rights of the instrument will be preserved and cited appropriately in my study. please i need your answer as soon as possible.

Abeer M. Shahen

--- On **Wed, 2/23/11, Ashley Theunissen *<Ashley.Theunissen@ed.ac.uk>*** wrote:

From: Ashley Theunissen <Ashley.Theunissen@ed.ac.uk>
Subject: Permission to use HBSC instrument
To: abeer_shahen@yahoo.com
Date: Wednesday, February 23, 2011, 3:54 PM

Dear Mr. Shaheen,

Thank you for your recent email regarding the use of the HBSC 1997/98 questionnaire. The HBSC Network will soon be releasing our abridged 2009/10 HBSC Survey Protocol which will include the latest version of the HBSC Mandatory Questionnaire. Also, the HBSC Network will be starting an HBSC Linked Project status which we would like you to register for when it is available in March 2011.

Please let me know if you wish to be interesting in using the new abridged 2009/10 HBSC protocol. If you register your interest, I will be in touch with you when the protocol is released on the HBSC website in early March 2011. At this time, you will be asked to register for the protocol and will have to sign a list of terms and conditions for use of the protocol.

If you would only like to use the 1997/98 protocol, please contact me at your earliest convenience.

I look forward to hearing from you.

Kind Regards,
Ashley Theunissen

Ms. Ashley V. Theunissen, LL.M
Legal Officer

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Appendix E: HSBC 1997/98 Questionnaire

HBSC 1997/8 QUESTIONNAIRE: CORE QUESTIONS

1. Are you a boy or a girl?

(1) Boy

(2) Girl

2. What month were you born? ....

3. What year were you born? ....

4. What class are you in?

1. Primary - 6 [6th grade]

2. Secondary - 2 [8th grade]

3. Secondary - 4 [10th grade]

[Use appropriate grade-level for your population]

5. What are your parents' jobs? Please describe exactly what they do, for example shop assistant, farm worker, lorry driver, dentist, hairdresser, and teacher. You can write don't know or has no paid job at the moment or unemployed.

My Father: ____

My Mother: ____

6. What do you think you will be doing when you finish high school *[**compulsory***

education]*? *[Adapt to own national context in order to separate: Continued education, vocational training/apprenticeship/trade and leaving school]

(1) College or University

(2) Vocational or technical school

(3) Apprenticeship / trade

(4) Working

(5) Unemployed

(6) Don't know

7. In your opinion: What does your class teacher(s) think about your school performance compared to your classmates?

(1) Very good

(2) Good

(3) Average

(4) Below average

8. How do you feel about school at present?

(1) I like it a lot

(2) I like it a bit

(3) I don't like it very much

(4) I don't like it at all

9. How much money do you usually get each week? (This includes pocket money and money you earn yourself).

....

10. Have you ever smoked tobacco? (At least one cigarette, cigar or pipe)

(1) Yes

(2) No

11. How often do you smoke tobacco at present?

(1) Every day

(2) At least once a week but not every day

(3) Less than once a week

(4) I do not smoke

12. How many cigarettes do you usually smoke in a week?

.... Cigarettes a week

13. Have you ever tasted an alcoholic drink? (That means beer, wine or spirits like... ***Add other drinks categories and examples as appropriate***)

(1) Yes

(2) No

(3) Don’t know

14. At present, how often do you drink anything alcoholic, such as beer, wine or spirits like....

[Add appropriate examples]? Try to include even those times when you only drink a small amount. (Please tick one box for each line)

	Every day (1)	Every week (2)	Every month (3)	Rarely (4)	Never (5)
Beer					
Wine					
Spirits/Liquor					

[Cider and other drinks categories can be added as relevant for each country]

15. Have you ever had so much alcohol that you were really drunk?

(1) No, never

(2) Yes, once

(3) Yes, 2-3 times

(4) Yes, 4-10 times

(5) Yes, more than 10 times

16. OUTSIDE SCHOOL HOURS: How OFTEN do you usually exercise in your free time so much that you get out of breath or sweat?

(1) Every day

(2) 4 to 6 times a week

(3) 2 to 3 times a week

(4) Once a week

(5) Once a month

(6) Less than once a month

(7) Never

17. OUTSIDE SCHOOL HOURS: How many HOURS a week do you usually exercise in your free time so much that you get out of breath or sweat?

(1) None

(2) About half an hour

(3) About 1 hour

(4) About 2 to 3 hours

(5) About 4 to 6 hours

(6) 7 hours or more

18. How often do you brush your teeth?

(1) More than once a day

(2) Once a day

(3) At least once a week but not daily

(4) Less than once a week

(5) Never

19. How often do you eat or drink any of the following?

(Please tick one box for each line)

	More than once a day (1)	Once a day (2)	Once a week but not daily (3)	Rarely (4)	Never (5)
a) Fruit					
b) Raw vegetables					
c) Cooked vegetables					
d) Coke or other soft drinks that contain sugar					
e) Sweets (candy or chocolate)					
f) Cakes or pastries					
g) Potato crisps					

h) Chips/fried potatoes

i) Hamburgers, hot dogs,

sausages

j) Whole wheat or rye bread

k) Low fat milk

l) Whole fat milk

m) Coffee

20. Are you on a diet to lose weight?

(1) No, because my weight is fine

(2) No, but I do need to lose weight

(3) Yes

21. How often do you use a seat belt when you sit in a car?

(1) Always

(2) Often

(3) Sometimes

(4) Rarely or never

(5) Usually there is no seat belt where I sit

(6) Never travel by car

22. How often do you wear a helmet when you ride a bicycle?

(1) Always

(2) Often

(3) Sometimes

(4) Rarely or never

(5) I do not ride bicycles

23. How healthy do you think you are?

(1) Very healthy

(2) Quite healthy

(3) Not very healthy

24. In general, how do you feel about your life at present?

(1) I feel very happy

(2) I feel quite happy

(3) I don’t feel very happy

(4) I’m not happy at all

25. Do you ever feel lonely?

(1) Yes, very often

(2) Yes, rather often

(3) Yes, sometimes

(4) No

26. In the last 6 months: how often have you had the following? (Please tick one box for each line)

	About every day (1)	More than once a week (2)	About every week (3)	About every month (4)	Rarely or never (5)
a) Headache					
b) Stomachache					
c) Back ache					
d) Feeling low					
e) Irritability or bad temper					
f) Feeling nervous					
g) Difficulties in getting to sleep					
h) Feeling dizzy					

27. How often do you feel tired when you go to school in the morning?

(1) Rarely or never

(2) Occasionally

(3) 1-3 times a week

(4) 4 or more times a week

28. During the last month have you taken any medicine or tablets for the following:

(Please tick one box for each line)

	No	Yes, once	Yes, more than once
	(1)	(2)	(3)
a) Headache			
b) Stomach-ache			
c) Difficulties in getting to sleep			
d) Nervousness			

29. How many hours a day do you usually watch TV?

(1) Not at all

(2) Less than half an hour a day

(3) Half an hour to 1 hour

(4) 2 to 3 hours

(5) 4 hours

(6) More than 4 hours

30. How many hours a week do you usually play computer games?

(1) Not at all

(2) Less than 1 hour a week

(3) 1 - 3 hours

(4) 4 - 6 hours

(5) 7 - 9 hours

(6) 10 hours or more

31. Please tick which of these people live at your home. If your mother and father live in different places, answer for the home where you live most of the time. (Please tick one box for each line)

I live with:	Yes (1)	No (2)
a) Mother		
b) Father		
c) Stepmother		
d) Stepfather		

32. How many of the following persons **live in your home**?

a) Sisters: ....

b) Brothers: ....

c) Grandparents: ....

d) Other people: ....

33. How easy is it for you to talk to the following persons about things that really bother you? (Please tick one box for each line)

	Very easy (1)	Easy (2)	Difficult (3)	Very difficult (4)	Don't have or see this person (5)
a) Father					
b) Mother					
c) Elder brother(s)					
d) Elder sister(s)					
e) Friends of the same sex					
f) Friends of the opposite sex					

34. How many close friends do you have?

(1) None

(2) One

(3) Two

(4) Three or more

35. Is it easy or difficult for you to make new friends?

(1) Very easy

(2) Easy

(3) Difficult

(4) Very difficult

36. How often do you spend time with friends right after school?

(1) 4-5 days a week

(2) 2-3 days a week

(3) Once a week or less

(4) Have no friends right now

37. How many evenings per week do you usually spend out with your friends?

0 1 2 3 4 5 6 7 evenings

38. Is there anything about your body you would like to change?

(1) Yes

(2) No

39. Do you think your body is:

(1) Much too thin

(2) A bit too thin

(3) About the right size

(4) A bit too fat

(5) Much too fat

(6) I don't think about it

40. Do you think you are:

(1) Very good looking

(2) Quite good looking

(3) About average

(4) Not very good looking

(5) Not at all good looking

(6) I don't think about my looks

41. How often do you feel .... (Please tick one box for each line):

	Always	Often	Sometimes	Rarely	Never
	(1)	(2)	(3)	(4)	(5)
Left out of things					

Helpless

Confident in yourself

HBSC 1997/8 QUESTIONNAIRE: FOCUS QUESTIONS (MANDATORY)

42. Please read these statements about your school carefully. For each statement tick one box.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	(1)	(2)	(3)	(4)	(5)
(a) In our school the students take part in making rules					
(b) The students are treated too severely/strictly in this school					
(c) The rules in this school are fair					
(d) Our school is a nice place to be					
(e) I feel I belong at this school					

43. Please tick one box for each of the statements about your teachers.

If you have only one teacher, think of this person when you answer the questions.

	Strongly Agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
(a) I am encouraged to express my own views in my class(es)					
(b) Our teachers treat us fairly					
(c) When I need extra help, I can get it					
(d) My teachers are interested in me as a person					

44. Please tick one box for each statement about the students in your class (es).

	Always (1)	Often (2)	Sometimes (3)	Rarely (4)	Never (5)
(a) The students in my class(es) enjoy being together					
(b) Most of the students in my class(es) are kind and helpful					

(c) Other students accept me as I am

45- How often do you think that going to school is boring؟

(1)Very often

(2) Often

(3) Sometimes

(4) Rarely

(5) Never

Here are some questions about bullying. We say a student is BEING BULLIED when another student, or a group of students, say or do nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she doesn't like. But it is NOT BULLYING when two students of about the same strength quarrel or fight.

46-How often have you been bullied in school this term؟

(1) I haven't been bullied in school this term

(2) Once or twice

(3) Sometimes

(4) About once a week

(5) Several times a week

47- How often have you taken part in bullying other students in school this term؟

(1) I haven't bullied others in school this term

(2) Once or twice

(3) Sometimes

(4) About once a week

(5) Several times a week

48- How often does it happen that other students don't want to spend time with you at school and you end up being alone؟

(1) It hasn't happened this term

(2) Once or twice

(3) Sometimes

(4) About once a week

(5) Several times a week

49. How many days did you ***skip*** classes or school this term? ***[Use appropriate word to indicate truancy)***

(1) 0 days

(2) 1 day

(3) 2 days

(4) 3 days

(5) 4 or more days

50. Please tick one box for each statement about your parents. If your mother and father live in different places, answer for the home where you live most of the time.

	Always (1)	Often (2)	Sometimes (3)	Rarely (4)	Never (5)
(a) If I have problems at school, my parents are ready to help					
(b) My parents are willing to come to school to talk to teachers					
(c) My parents encourage me to do well at school					

51. Do you feel safe at school?

(1) Always

(2) Often

(3) Sometimes

(4) Rarely

(5) Never

52. Please tick one box for each of these statements:

	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
	(1)	(2)	(3)	(4)	(5)
(a) My parent s expect too much of me at school					
(b) My teachers expect too much of me at school					

53. How pressured do you feel by the schoolwork you have to do?

(1) Not at all

(2) A little

(3) Some

(4) A lot

54. Does your family have a car or a van?

(1) No

(2) Yes, one

(3) Yes, two or more

55. Do you have your own bedroom for yourself?

(1) Yes

(2) No

56. How well off do you think your family is?

(1) Very well off

(2) Quite well off

(3) Average

(4) Not very well off

(5) Not at all well off

57. During the past year, how many times did you travel away on holiday (vacation) with your family?

(1) Not at all

(2) Once

(3) Twice

(4) More than twice

END OF MANDATORY QUESTIONNAIR

Appendix F: Arabic translation of the HSBC 1997/98 Questionnaire

معلومات شخصية

1. الجنس؟
   1. ذكر
   2. انثى
2. كم عمرك؟
   1. 10 سنوات أو أقل
   2. 11 سنة
   3. 12 سنة
   4. 13 سنة
   5. 14سنة
   6. 15 سنة
   7. 16 سنة أو أكثر
3. في أي شهر ولدت؟---------------
4. في أي سنة ولدت؟-----------------
5. الصف:
   1. السادس
   2. السابع
   3. الثامن
   4. التاسع
   5. العاشر
6. ما هو أعلى مستوى تعليمي لوالدتك؟
   1. لم تحصل على الثانوية العامة
   2. شهادة ثانوية عامة
   3. شهادة دبلوم
   4. شهادة بكالوريوس
   5. دراسات عليا (ماجستير، دكتوراة)

6. لا أعلم

7. ما هو أعلى مستوى تعليمي لوالدك؟

1. لم يحصل على الثانوية العامة
2. شهادة ثانوية عامة
3. شهادة دبلوم
4. شهادة بكالوريوس
5. دراسات عليا (ماجستير، دكتوراة)
6. لا أعلم

8. ما هو عمل والدك----------------

ما هو عمل والدتك----------------

9. ماذا ستفعل عندما تنهي مرحلة التعليم الإلزامي؟

1. ستلتحق بالكلية أو الجامعة
2. ستكمل في مجال التعليم المهني
3. ستتعلم حرفة
4. ستعمل
5. ستجلس عاطلا عن العمل
6. لا تعلم ماذا ستفعل

10. من وجهة نظرك ، كيف يقيم المعلمون آدائك المدرسي بالمقارنة مع زملائك؟

1. جيد جدا
2. جيد
3. متوسط
4. أقل من المتوسط

11. ماذا تشعر تجاه مدرستك في الوقت الحالي؟

1. أحبها كثيرا
2. أحبها قليلا
3. لا أحبها كثيرا
4. لا أحبها إطلاق

12. ما هو دخلك الأسبوعي-----------------------------------

13. خارج أوقات المدرسة ، كم مرة تقوم بممارسة النشاط البدني في أوقات فراغك لدرجة تجعلك تتوقف عن التنفس أو تعرق؟

1. كل يوم
2. 4-6 مرات في الأسبوع
3. 2-3 مرات في الأسبوع
4. مرة في الأسبوع
5. مرة في الشهر
6. أقل من مرة في الشهر
7. أبدا

14. خارج أوقات المدرسة ، كم عدد الساعات بالأسبوع التي تقضيه في ممارسة النشاط البدني في أوقات فراغك لدرجة تجعلك تتوقف عن التنفس أو تعرق؟

1. ولا ساعة
2. نصف ساعة
3. ساعة واحدة
4. 2-3 ساعة
5. 4-6 ساعة
6. 7 ساعات أو أكثر

15. كم مرة تنظف أسنانك ؟

1. أكثر من مرة واحدة في اليوم
2. مرة واحدة في اليوم
3. مرة واحدة في الأسبوع على الأقل لكن ليس يوميا
4. أقل من مرة في الأسبوع
5. أبدا

16. كم عدد مرات تناولك للأطعمة أو الأشربة التالية خلال الأسبوع؟ ضع علامة √ تحت العمود المناسب

	أبدا	أقل من مرة في الأسبوع	مرة في الأسبوع	مرة واحدة، كل يوم	كل يوم، أكثر من مرة
الفواكه					
الخضار					
الخضار المطبوخة					
كوكا كولا أو أي مشروبات غازية أخرى					
الحلويات(شوكولاته)					
الكيك أو أي مشروبات تحتوي على السكر					
رقائق البطاطا					
شبس بطاطا					
همبرغر، هوت دوغ، أو سوسيج					
خبز أبيض أو خبز أسمر					
حليب قليل أو عديم الدسم					
حليب كامل الدسم					
قهوة					

17. كم يبلغ وزنك بدون ارتداء الحذاء؟

------------------------------ (كغم)

18. كم يبلغ طولك بدون ارتداء الحذاء؟

19. ----------------------------- (سم)

20. هل تتبع الحمية أو تحاول فعل شيء آخر حتى تخسر وزنك حاليا ؟

1. لا، لأن وزني مناسب
2. لا،لكن يجب أن أخسر بعض الوزن
3. نعم

21. كم مرة تستخدم حزام الأمام عند جلوسك في السيارة ؟

1. دائما
2. غالبا
3. أحيانا
4. نادرا أو أبدا
5. عادة لا يوجد حزام أمان في المكان الذي أجلس فيه
6. لا أستخدم السيارة في التنقل

22. كيف تصف صحتك؟

1. ممتازة
2. جيدة
3. ليست جيدة

23. بشكل عام ، كيف تشعر حيال حياتك في الوقت الحالي؟

1. أشعر بأنني سعيد جدا
2. أشعر بأنني سعيد
3. لا أشعر بأنني سعيد
4. لا أشعر بأنني سعيد إطلاقا

24. هل تشعر بالوحدة؟

1. نعم ، كثيرا
2. نعم ، في كثير من الأحيان
3. نعم ، أحيانا
4. لا

25. خلال الأشهر الستة الماضية: كم مرة شعرت بأي مما يلي (ضع علامة √ تحت العمود المناسب)

	نادرا أو أبدا	تقريبا كل شهر	تقريبا كل أسبوع	أكثر من مرة في الأسبوع	تقريبا كل يوم
صداع					
ألم في المعدة					
ألم في الظهر					
الشعور بالضعف					
مزاج متعكر					
الشعور بالعصبية					
صعوبة في النوم					
الشعور بالدوار					

26. كم مرة شعرت بأنك متعب في الصباح عند ذهابك إلى المدرسة ؟

1. نادرا أو أبدا
2. أحيانا
3. 1-3 مرات في الأسبوع
4. 4 مرات أو أكثر في الأسبوع

27. خلال الشهر الماضي ، كم مرة تناولت الدواء لأي من الأسباب التالية (ضع علامة √ تحت العمود المناسب)

	لا	نعم، مرة	نعم، أكثر من مرة
صداع			
ألم في المعدة			
صعوبة في النوم			
عصبية			

28. كم ساعة في اليوم تقضيها بمشاهدة التلفاز (DVD أو الفيديو) في أوقات فراغك؟

1. لا أشاهد التلفاز نهائيا
2. أقل من نصف ساعة
3. نصف ساعة إلى ساعة
4. 2-3 ساعات
5. 4 ساعات
6. أكثر من 4 ساعات

29. كم عدد الحواسيب التي تمتلكها العائلة؟

1. لا يوجد
2. واحد
3. اثنين
4. أكثر من اثنين

30. هل لدى عائلتك اشتراك في الإنترنت في المنزل؟

1. نعم
2. لا

31. في أي عمر بدأت باستخدام الإنترنت؟

1. لم يسبق أن استخدمت الإنترنت
2. كان عمري----------------

32. تقريبا كم ساعة في الأسبوع تقضيها أمام الحاسوب (للعب ، إرسال الرسائل الإلكترونية ، الدردشة أو تصفح الإنترنت أو الفيس بوك)؟

1. لا أقضي وقت إطلاقا
2. أقل من ساعة
3. 1-3 ساعات
4. 4-6 ساعات
5. 7-9 ساعات
6. 10 ساعات أو أكثر

33. الرجاء اختيار الأشخاص الذين يعيشون معك في نفس المنزل (ضع علامة √ تحت العمود المناسب)

	نعم	لا
الأم		
الأب		
زوج الأم		
زوجة الأب		

34. كم عدد الأشخاص فيما يلي الذين يعيشون في منزلك

1. أخوات---------
2. إخوة-----------
3. أجداد----------
4. أشخاص آخرون--------------

35. ما مدى سهولة التحدث إلى الأشخاص التالية عن الأمور التي تزعجك؟ (ضع علامة √ تحت العمود المناسب)

	لا يوجد لدي هذا الشخص أو لا أستطيع رؤيته	صعب جدا	صعب	سهل	سهل جدا
الأب					
الأم					
الأخ الأكبر					
الأخت الكبرى					
أصدقائك من نفس الجنس					
أصدقائك من الجنس الآخر					

36. في الوقت الحالي ، كم عدد أصدقائك المقربين من الذكور و الإناث؟

1. لا يوجد
2. واحد

3. اثنين
4. ثلاثة أو أكثر

37. هل من السهل أو الصعب تكوين صداقات جديدة؟
    1. سهل جدا
    2. سهل
    3. صعب
    4. صعب جدا

38. كم يوما من أيام الأسبوع تقضيه بصحبة أصدقائك بعد المدرسة مباشرة؟
    1. 4-5 أيام في الأسبوع
    2. 2-3 أيام في الأسبوع
    3. مرة واحدة في الأسبوع أو أقل
    4. لا يوجد لدي أصدقاء في الوقت الحالي

39. كم مرة في الأسبوع تقضي فترة المساء مع أصدقائك؟
    1. و لا مرة
    2. مرة واحدة
    3. 2 مرة
    4. 3 مرة
    5. 4 مرة
    6. 5 مرة
    7. 6 مرة
    8. 7 مرة

40. كيف تصف وزنك؟
    1. أقل كثيرا من الوزن المناسب
    2. أقل قليلا من الوزن المناسب
    3. مقارب للوزن المناسب
    4. أكثر قليلا من الوزن المناسب
    5. أكثر كثيرا من الوزن المناسب
    6. لا أفكر بذلك

41. هل تعتقد بأنك:

1. تبدوا جيد جدا
2. تبدو جيد
3. تبدو متوسط
4. لا تبدوا جيد جدا
5. لا تبدوا جيد على الإطلاق
6. لا تفكر كيف تبدو

42. كم مرة تشعر بأنك-----------------(ضع علامة √ تحت العمود المناسب)

	دائما	غالبا	أحيانا	نادرا	أبدا
غريب الأطوار					
عاجز					
واثق بنفسك					

43. الرجاء أن تقرأ العبارات التالية بخصوص مدرستك و أن تعبر عن مدى موافقتك أو عدم موافقتك مع العبارات التالية (الرجاء وضع علامة √ أمام كل عمود)

	لا أوافق بشدة	لا أوافق	محايد	أوافق	أوافق بشدة
في مدرستي الطلاب يشاركون في وضع القوانين					
الطلاب تتم معاملتهم بشكل صارم في هذه المدرسة					
القوانين في هذه المدرسة عادلة					
مدرستي مكان جميل التواجد به					
أشعر بالإنتماء لهذه المدرسة					

44. الرجاء أن تقرأ العبارات التالية بخصوص مدرسيك و أن تعبر عن مدى موافقتك أو عدم موافقتك مع العبارات التالية (الرجاء وضع علامة √ أمام كل عمود)

	لا أوافق بشدة	لا أوافق	محايد	أوافق	أوافق بشدة
يتم تشجيعي للتعبير عن رأيي في الصف					
المعلمون يتعاملون معنا بعدالة					
عندما أحتاج مساعدة إضافية فإنني أستطيع الحصول عليها					
معلمي مهتمون بي كشخص					

45. الرجاء أن تقرأ العبارات التالية بخصوص طلاب صفك و أن تعبر عن مدى موافقتك أو عدم موافقتك مع العبارات التالية (الرجاء وضع علامة √ أمام كل عمود)

	لا أوافق بشدة	لا أوافق	محايد	أوافق	أوافق بشدة
الطلاب في صفي يستمتعون بقضاء وقتهم مع بعضهم البعض					
معظم الطلبة في صفي لطفاء و متعاونين					
الطلاب يتقبلوني كما أنا					

46. هل تعتقد بأن الذهاب للمدرسة أمر ممل؟

1. دائما
2. غالبا
3. أحيانا
4. نادرا
5. أبدا

<u>الأسئلة التالية عن الإساءة ، و الإساءة تحدث عندما يقوم طالب أو مجموعة من الطلاب بقول أو بعمل سيء لطالب آخر. ولا تعتبر اساءة عندما يقوم طالبان بنفس القوة بالمجادلةأو المشاجرة أو عندما تتم الإساءة بطريقة المزح أو الصداقة</u>

47. خلال هذا الفصل كم عدد المرات التي تعرضت فيها للإساءة في المدرسة؟
    1. لم أتعرض للإساءة
    2. تعرضت للإساءة مرة أو مرتين
    3. تعرضت للإساءة في بعض الأحيان
    4. تعرضت للإساءة مرة كل أسبوع
    5. تعرضت للإساءة عدة مرات بالأسبوع
48. كم مرة شاركت في الإساءة لطالب آخر في المدرسة خلال هذا الفصل؟
    1. لم أشارك في الإساءة لطالب آخر
    2. شاركت مرة أو مرتين فقط
    3. شاركت في الإساءة بعض الأحيان
    4. شاركت مرة واحدة في الأسبوع
    5. شاركت عدة مرات في الأسبوع
49. إذا كنت قد تعرضت للإساءة خلال الشهريين الماضيين، من الذي أساء إليك؟
    1. لم أتعرض للإساءة في المدرسة خلال الشهريين الماضيين
    2. مدرس
    3. مجموعة من المدرسين
    4. طالب
    5. مجموعة من الطلبة
    6. شخص آخر (حدد) ------------------
50. كم مرة رفض الطلبة الآخرون قضاء وقت معك مما جعلك تشعر بالوحدة؟
    1. لم يحدث خلال هذه السنة
    2. مرة أو مرتين
    3. أحيانا
    4. مرة في الأسبوع
    5. عدة مرات في الأسبوع

51. كم مرة تغيبت عن المدرسة خلال هذا الفصل؟

1. ولا يوم
2. يوم واحد
3. يومين
4. 3 أيام
5. 4 أيام او اكثر

52. الرجاء أن تقرأ العبارات التالية بخصوص والديك و أن تعبر عن مدى موافقتك أو عدم موافقتك مع العبارات التالية (الرجاء وضع علامة √ أمام كل عمود)

	أبدا	نادرا	أحيانا	غالبا	دائما
إذا حدثت مشاكل في المدرسة ، أهلي على استعداد للمساعدة					
أهلي على استعداد للقدوم و التحدث للمدرسين					
أهلي يشجعوني على الأداء الجيد في المدرسة					

53. هل تشعر بأن المدرسة مكان آمن؟

1. دائما
2. غالبا
3. أحيانا
4. نادرا
5. أبدا

54. الرجاء أن تقرأ العباراتين التاليتين و أن تعبر عن مدى موافقتك أو عدم موافقتك مع العبارات التالية (الرجاء وضع علامة √ أمام كل عمود)

	لا أوافق بشدة	لا أوافق	محايد	أوافق	أوافق بشدة
أهلي يتوقعون مني أكثر من اللازم في المدرسة					
المعلمون يتوقعون مني أكثر من اللازم في المدرسة					

55. ما هو مقدار الضغط الذي تشعر به نتيجة لفروضك المدرسية الواجب انجازها؟
1. لا أشعر إطلاقا
2. أشعر قليلا بالضغط
3. أشعر ببعض الضغط
4. أشعر بالضغط كثيرا

56. هل تمتلك عائلتك سيارة ؟
1. لا
2. نعم ، واحدة
3. نعم ، اثنتين أو أكثر

57. هل لديك غرفة نوم خاصة بك؟
1. لا
2. نعم

58. كيف تقيم حالة أسرتك؟
1. جيدة جدا
2. جيدة
3. متوسطة
4. ليست جيدة
5. ليست جيدة ابدا

59. خلال الإثناعشرة شهر الماضية ، كم مرة كم مرة ذهبت مع عائلتك في نزهة؟
1. و لا مرة
2. مرة واحدة
3. مرتين
4. أكثر من مرتين

انتهت الأسئلة

شاكرة لكم حسن تعاونكم

Appendix G: Pilot Study Form

Pilot Testing

After completing the provided questionnaire, please answer the following questions, which may help in evaluating the questionnaire in terms of clarity, feasibility and appropriateness to the reader.

1- How long did it take to complete the questionnaire? …………………./.minutes

2- Were the instructions clear? ☐ Yes ☐ No

3- Were any questions unclear or ambiguous? ☐ Yes ☐ No

If yes, which one? ....

4- Did you object to answer any questions? ☐ Yes ☐ No

If yes, which one? ....

5- Was the layout clear and attractive? ☐ Yes ☐ No

6- Any other comments?

____

____

____

اختبار تجريبي

بعد الانتهاء من الاستبيان، يرجى الإجابة على الأسئلة التالية ، التي قد تساعد في تقييم الاستبيان من حيث الوضوح والملاءمة للقارئ.

1 كم من الوقت يستغرق لإكمال الاستبيان؟ ..../ دقيقة

2 هل كانت التعليمات واضحة؟ نعم------- لا---------

3 هل كان هناك أي أسئلة غير واضحة أو غامضة؟ نعم لا-------------

إذا كانت الإجابة بنعم، حدد السؤال؟--

4 هل كان لديك اعتراض على الإجابة عن أي من الأسئلة؟ نعم------- لا--------

إذا كانت الإجابة بنعم، حدد السؤال؟ --

5 هل كان تصميم الإستبيان واضح وجذاب؟ نعم------- لا--------

6 هل هنالك اي ملاحظات أخرى؟

أثر البيئة المدرسية على السلوكيات الصحية لدى الطلبة المراهقين في مدينة عمان

إعداد
عبير محمد عبد شاهين

المشرف
الدكتورة سميحة جراح

المشرف المشارك
الدكتورة ماري نورتون

الملخص

أهمية الدراسة

الممارسات الصحية للطلبة في مرحلة المراهقة لها الأثر على صحة الفرد في المستقبل، وبالرغم من ذلك هنالك القليل من المعلومات المتوفرة حول العلاقة بين البيئة المدرسية وسلوكيات المراهقين الصحية في الأردن.

الهدف

دراسة أثر الجانب الإجتماعي و النفسي للبيئة المدرسية و الذي يتضمن الدعم المقدم من الأقران و المعلمين على السوكيات الصحية للمراهقين و تقييم تواتر حدوث هذه السلوكيات بين هؤلاء الطلبة في عمان.

منهجية البحث

دراسة وصفية مقطعية تم فيها استخلاص عينة من المراهقين في المدارس الذين تتراوح أعمارهم ما بين 11 إلى 15 سنة. وشملت العينة النهائية 1166 طالبا و طالبة من خمس مدارس حكومية واثنتين من المدارس الخاصة في مدينة عمان.

النتائج

كشفت الدراسة أن النظرة السلبية تجاه البيئة المدرسية و الشعور بعدم وجود دعم من الأقران و المعلمين في المدرسة كان مرتبطا بعدم تنظيف الأسنان بشكل دوري. بالإضافة إلى ذلك ارتبط الشعور بعدم وجود دعم من المعلمين في المدرسة بقلة ممارسة النشاط البدني. عدم استخدام حزام

الأمان شكل أعلى نسبة تواتر بين السلوكيات غير الصحية (85,8 ٪) في حين أن عدم تنظيف الأسنان بشكل دوري شكل أدنى معدل تواتر (46,9 ٪). قلة النشاط البدني و الغذاء غير الصحي شكل نسبة تواتر أعلى بين الإناث في حين أن عدم تنظيف الأسنان بشكل دوري شكل نسبة تواتر أعلى بين الذكور. قلة النشاط البدني شكل نسبة تواتر أعلى لدى طلبة المدارس الحكومية.
الإستنتاجات : هذه النتائج تشير الى أن التدخلات التي تستهدف البيئة المدرسية، وتهدف إلى تحسين العلاقة مع الأقران والمعلمين يمكن أن تؤدي إلى تحسين صحة الطلبة المراهقين.

الكلمات المستخدمة في البحث

المراهقين، السلوك الصحي،البيئة المدرسية ، دعم الأقران، دعم المعلمين ، استخدام السجائر ، النشاط البدني، العادات الغذائية ، استخدام حزام الأمان، وصحة الأسنان.